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OPTING FOR CO-OPERATION

A PROCESS IN ACTION

THE FIRST PHASES



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Report of the :

SITING TASK FORCE

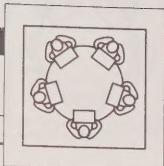
Low-Level Radioactive Waste Management



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O P T I N G F O R C O - O P E R A T I O N

A PROCESS IN ACTION

T H E F I R S T P H A S E S

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August 1990

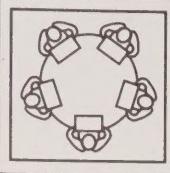


Report of the :

SITING TASK FORCE

Low-Level Radioactive Waste Management





SITING TASK FORCE

Low-level Radioactive Waste Management

GROUPE DE TRAVAIL

Choix d'un site de gestion des déchets faiblement radioactifs

August 1, 1990

The Honourable Jake Epp, P.C., M.P.
Minister of Energy, Mines and Resources
580 Booth Street
Ottawa, Ontario
K1A 0E4

Dear Minister:

We, the undersigned members of the Siting Task Force, are pleased to provide you with a full report on our progress to the end of Phase three of the five-phase Cooperative Siting Process. Recently we provided you with a synopsis report which summarizes our activities and recommendations.

In considering this record of our work, we ask that you focus on the following factors which are critical to the success of the balance of the Cooperative Siting Process.

It is our firm conviction that the federal government, through the appointment of the new Task Force, should resolve the historic low-level radioactive waste management problem at the earliest possible time. This should be carried out in the most environmentally acceptable, socially responsible and cost effective manner. We urge you to obtain the approval of your colleagues as soon as possible so that the Cooperative Siting Process can be completed while the current level of community support is in place.

The Secretariat provides a core of excellent staff. However, the current allocation of personnel and resources will not be sufficient to handle the workload in Phases four and five. Individuals who are able to manage large contracts, carry out intensive community consultation and provide support in financial negotiations will be required. Also, individuals who have an understanding of the environmental assessment review process will be needed.

At the end of Phase four, those communities seriously interested in accepting a low-level radioactive waste management facility will measure community acceptance by a formal referendum. It is essential that Council, together with federal representatives, agree on the specifics of impact management measures and equity compensation before the referendum is carried out so that local residents are fully informed of all costs and benefits when they cast their vote.

The question arises as to who will be in the best position to negotiate impact management and compensation with the local communities. We believe that the Secretary-General of the Secretariat will be in the best position to represent the government in the development of agreements acceptable to both the community and the federal government. It would not be wise to bring in an unknowledgeable third party, at the end of the day, who has not had any involvement in the Cooperative Siting Process.

Finally, it is important for all parties to be highly sensitive to the issues involved and to recognize the level of cooperation shown by interested communities at this point in the Cooperative Siting Process. In light of the history of attempts to site waste management facilities, we are most fortunate, as Phase three concludes, to have communities willing to continue into the next phase. However, their support for the Cooperative Siting Process is fragile; there remains a mistrust of government and associated agencies and the information they provide. This is not to say that these agencies should be ignored. On the contrary, they are vital participants. It is important that they understand and fully support the underlying principles and safeguards of the Cooperative Siting Process to resolve the long-term management of the historic low-level radioactive wastes. We believe their participation in the Cooperative Siting Process should continue.

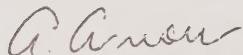
At the same time, we believe that speakers from independent, non-government organizations played a critical role in providing information relating to low-level radioactive waste management. During the consultation program, these speakers were well-received by the communities and helped to foster trust in the Cooperative Siting Process. We strongly support their continued involvement in the next phases.

We would be pleased to discuss our efforts and recommendations with you.

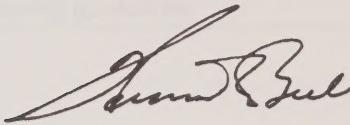
Yours respectfully,



Paul Rennick
Chairman



Audrey M. Armour



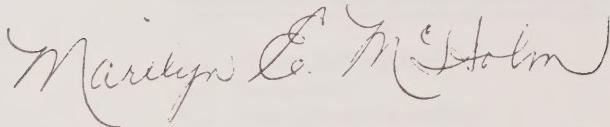
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Acknowledgements

During implementation of the Cooperative Siting Process, we had the most fortunate and rewarding experience of meeting and working very closely with a wide range of committed individuals.

The members of the Community Liaison Groups supported by a group of dedicated community facilitators worked diligently to complete their consultation programs. Many Municipal Councils kept close contact with their groups, carefully following the progress of their community consultation programs. The twenty-seven guest speakers who participated in Phase three of the Cooperative Siting Process often braved adverse weather conditions to present pertinent information to the various communities.

We would like to thank our technical advisors: the Low-Level Radioactive Waste Management Office, Atomic Energy Control Board staff, Environment Canada, the Uranium and Nuclear Energy Branch of Energy, Mines and Resources Canada, Ontario Ministry of the Environment, the Canadian Transport Commission, the Department of Transport, and the Ontario Ministry of Transportation and Communications for the continued support they have provided to us, our Secretariat and the communities.

And finally, we express our sincere gratitude to the Secretariat for its commitment and support, patience and stamina in helping us bring this chapter of the Cooperative Siting Process to a successful conclusion.

Our mandate

On December 11, 1986, after several attempts by a federal crown corporation to site a low-level radioactive waste management facility in Ontario, the federal government established an independent task force to advise it on a less confrontational approach. Twelve months later, the Siting Process Task Force recommended the Cooperative Siting Process which is based on voluntary participation of local communities in a collaborative, joint decision-making manner. It included a set of principles and safeguards, as outlined in Table 1, derived from intensive consultations with residents, proponents, public interest groups and others who have been involved or affected by facility siting processes. This innovative process is described in a report entitled *Opting for co-operation*.¹

Acting on the recommendation of the Siting Process Task Force Report, on September 30, 1988, the Honourable Marcel Masse, then Minister of Energy, Mines and Resources, appointed the new Siting Task Force to implement the first three phases of the five-phase Cooperative Siting Process (Figure 1). The Siting Task Force's mandate was to initiate the Process aimed at the improved management of low-level radioactive wastes in Ontario and report back to the Minister of Energy, Mines and Resources, in 18 months, its findings regarding volunteer communities, recommended disposal options, proposals for the terms of reference for negotiations with the volunteer communities, and the detailed cost implications of implementing the defined options with the communities.

The specific terms of reference of the Siting Task Force were as follows:

- a) to promote an examination of scientific and public reports prepared for the Siting Process Task Force
- b) to draft, and circulate for comment, guidelines for siting and impact management which set out the basic principles to be followed, roles and key players, characteristics of suitable sites and the available technologies. Impact management guidelines should indicate the forms that compensation can take and how it will be determined

- c) to report to the Minister of Energy, Mines and Resources in six months' time outlining the basic guidelines to address the anticipated costs associated with different waste management techniques, distances travelled, compensation packages, site evaluation and rehabilitation
- d) to conduct regional and community information and consultation meetings to explain the nature of the radioactive materials, potential risks, the role of the community and key players in the Process, and siting and compensation guidelines. Later meetings would address the scale of the project, technology options, possible benefits, mitigation measures and compensation policy
- e) to use the Low-Level Radioactive Waste Management Office as one of its technical advisers
- f) to return to Cabinet in 18 months with a report on the Process itself, a profile of volunteer communities, recommended disposal options, proposals for the terms of reference for negotiations with the volunteer communities, and the detailed cost implications of implementing the defined options with the communities.

Because of the high level of community interest in the Cooperative Siting Process, the time frame for the Siting Task Force to implement its mandate was extended to 23 months.

¹ Siting Process Task Force. *Opting for co-operation*. Ottawa: 1987

Table 1

Principles and safeguards

Principles

1. The Community should volunteer and have the right to opt out of the Process at any time, rather than be selected by the project sponsor at its discretion.

This principle moves away from the approach of imposing a technical decision on a community and avoids the 'Decide, Announce and Defend' syndrome, which is inherently confrontational.

2. The community should be a partner in problem-solving and decision-making throughout the Process.

The Siting Task Force will ensure that volunteer communities maintain a strong element of control in the Process.

3. The community should receive compensation to offset unmitigable impacts and enhance local benefits.

The aim of the Process is to ensure that the community is better off as a result of its decision to accept a facility.

4. The community should have the right to select, from given technical options and impact management measures, the ones that are acceptable to it.

With this approach, the Siting Task Force ensures that technical and impact management decisions are fully responsive to the community's needs and preferences.

5. The Siting Task Force responsible for the implementation of the Process must ensure that the safety of the environment and human health are not compromised for any reason.

Safety is a fundamental criterion in the siting of a facility and must not be compromised.

Safeguards

1. An explicit up-front impact management policy will be used to ensure that all communities are aware of the range of options available to them.

This safeguard ensures that all communities interested in volunteering for the facility are equally and fully informed about the kinds of compensation and impact management measures available to them.

2. Community-selected advisors will be employed to ensure that local interests are protected in the process of joint fact-finding and problem-solving.

No community should be disadvantaged due to lack of advice nor should it be compelled to use consultants whom it feels may not represent its interests.

3. Thorough site and technology assessments, designed jointly by the community, the Siting Task Force and technical experts will be carried out to ensure that decisions are based on full information.

The Siting Task Force will ensure that decisions are based on "informed consent" with full information on both the positive and negative implications of a facility.

4. A broadly-based Community Liaison Group will be established to work with the Siting Task Force and local officials.

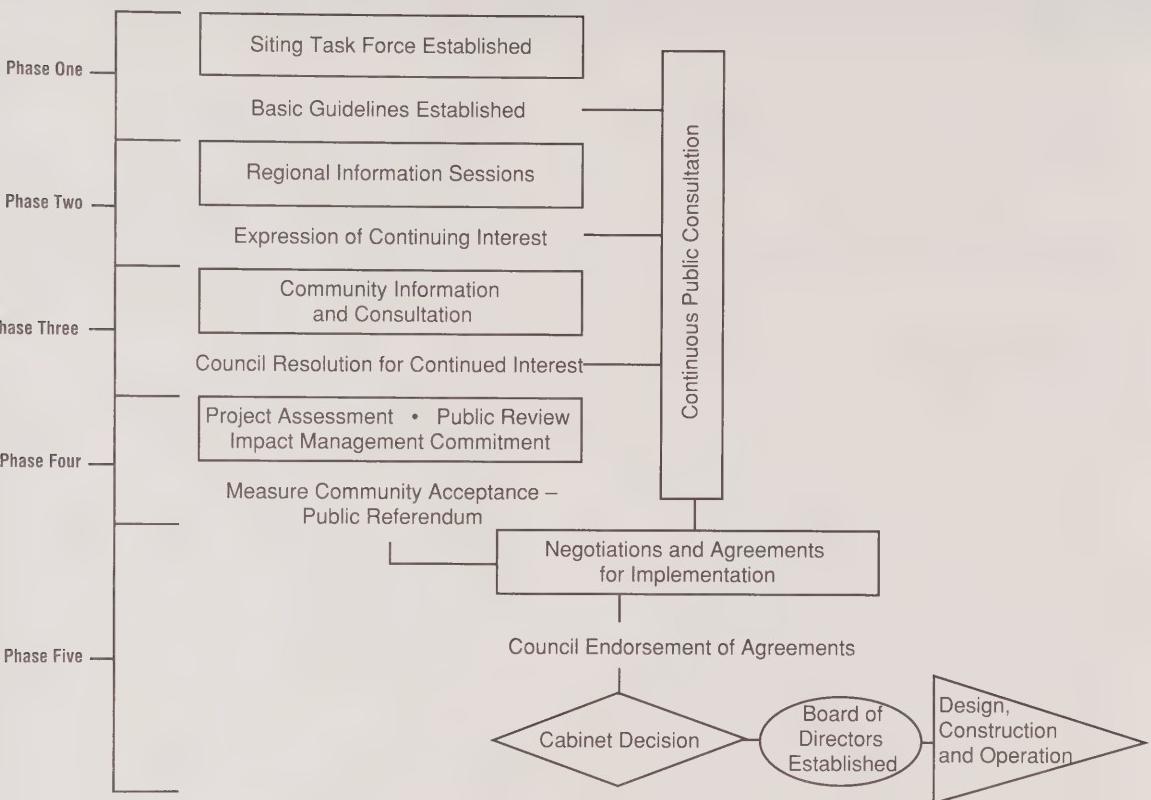
While Municipal Council is the decision-maker of record for the community, a Community Liaison Group, exclusive of Council, is established to facilitate information sharing and consultation and determine consensus.

5. Funding will be provided to allow for community participation in the Process.

To reinforce Safeguard four, the Siting Task Force recognizes the need to provide residents with resources so they can, in fact, participate in the Process.

Figure 1

The Cooperative Siting Process



Chapter one

Phase one: Initiating the Cooperative Siting Process

1.1 Initial steps

While the Cooperative Siting Process was generally well-received, it was apparent from comments submitted on *Opting for co-operation* that the Siting Task Force would have to make some adjustments, clarify certain features and prepare information materials before beginning active community consultation.

1.2 Process adjustments

The Task Force began by making the following adjustments. Site elimination and the identification of technology options were moved forward into the third phase from the fourth, as it was important to determine then whether interested communities had any suitable land for the proposed facility. Initially, it was intended that site elimination would occur early in Phase four when detailed environmental assessment studies would be undertaken. However, it was realized that this approach was not only inefficient but could add unwarranted costs to that phase.

Further, the Community Liaison Group was to be appointed by the Siting Task Force rather than by Council. At first, it was proposed that Council would appoint the Community Liaison Group; however, when this matter was discussed with the Municipal Councillors, they requested that the procedure be changed to allow them to maintain their neutrality.

1.3 Response to requests for clarification

The Siting Task Force found it necessary to clarify certain features of the Process. Some were relatively straightforward such as:

- **confidentiality of meetings** – the Task Force emphasized that all Community Liaison Group meetings would be open to the public

- **ongoing low-level radioactive wastes** – though the quantities are small, communities were told that if they wished, they could put forth the option of developing a facility that would accept these wastes
- **opting out of the Cooperative Siting Process** – the Task Force reiterated that communities could opt out at any time
- **community report** – clarification was made on items to be included in the report that the Community Liaison Group would have to prepare, at the end of Phase three, for its Council and the Task Force
- **the definition of “community”** – the Task Force recognized three communities—potential volunteer, source and access-route—and clarified their roles and responsibilities in the Process (see Section 2.4). Particularly, it emphasized that access-route Community Liaison Groups will be established in Phase four to enable their active involvement in developing transportation impact management plans. It is proposed that the access-route Community Liaison Group members each represent a regional segment along the transportation route.

Another more complex issue which affected the Task Force's mandate was the issue of waste management priorities. The Task Force set its priorities on the basis of how best to improve the overall management of the low-level radioactive wastes in Ontario. These wastes were divided into three basic categories: uranium mine and mill tailings, incidental wastes, and wastes resulting from the production of nuclear energy and radioisotopes. The latter category was further divided into historical wastes (waste accumulated from past practices) for which the federal government has assumed responsibility, and **ongoing wastes** which are now stored either on-site at the producer or shipped to the Chalk River low-level radioactive waste management facility. After discussions with key organizations and interested groups and a review of the inventory of waste quantities and current

waste management practices, the Task Force placed top priority on improved management of the historic wastes. These waste deposits are located in Port Hope, Scarborough, and at the Welcome and Port Granby sites in Hope Township and Newcastle, respectively. Without improved management, these wastes may pose long-term risks for the environment and health of the people nearby, as well as continue to restrict surrounding land-uses.

The Task Force concluded that improved management of uranium mine and mill tailings in location, including restricted access, appeared to be the most appropriate measure to handle the large accumulations. However, the Task Force decided that if a community with tailings accumulations chose to participate in Phase three, the feasibility of co-management of the wastes with at least some of the tailings would be examined. In all cases, the community was advised that jurisdictional responsibility for the long-term management of the tailings was under negotiation with the federal and provincial governments. Prior to decommissioning a tailings site, the mining company would remain responsible; both levels of government would likely be involved in developing any tailings/waste co-management option.

With respect to smaller accumulations of incidental wastes found at such locations as Haley Station, Mississauga, Thorold, Niagara Falls and Ottawa (total volume is 28,400 m³), the Task Force concluded that the accumulations could be removed and placed in a new facility. Such improved management could occur providing the province and the particular industry responsible were agreeable and the volunteer community was a willing recipient. Therefore, the Task Force advised that should a volunteer community be interested in receiving these wastes at a new facility, negotiations would be required among both levels of government and the particular industry.

The Task Force surmised that the larger deposits of incidental wastes found at Courtright and Port Maitland, resulting from the phosphate fertilizer industry, were best managed in situ. (It should be noted that the Task Force was informed that the Atomic Energy Control Board has removed incidental wastes from its jurisdiction. To date, the Task Force is not aware that the Province of Ontario has accepted responsibility for the regulation of these deposits.)

To summarize, the Task Force placed top priority on the improved management of the historic low-level radioactive waste accumulations produced from past practices and located in Port Hope, Scarborough and at the Welcome and Port Granby sites. The approximate total volume of these wastes is as follows:

Location	Volume (cubic metres)
Port Hope	223,300
Scarborough	3,300
Welcome	222,500
Port Granby	360,000
	809,100
Bulking up factor (approximately 9%)	70,000
Approximate total	880,000

1.4 Preparation of information materials

Once the initial issues were addressed, the Task Force focused on preparing a province-wide consultation program.

First, a letter was sent to provincial interest groups and government agencies requesting comments on the technical background reports that were attached to *Opting for co-operation*. These background reports formed the basis for information that was provided to communities in Phases two and three, and the technical review was necessary to ensure accuracy.

Second, an audio-visual presentation was produced to explain the key features of the Cooperative Siting Process, the wastes in question and how they might best be managed. An information kit was developed to provide data on the need for improved management of low-level radioactive wastes, the process of joint problem-solving and decision-making regarding facility siting and the resources available to assist participants. The kit contained fact sheets describing the various phases and fundamentals of the Process including a description of the principles and safeguards. The low-level radioactive wastes at Scarborough, in Port Hope and at the Welcome and Port Granby sites were described along with the technologies considered

suitable for their long-term management. Draft site elimination criteria and impact management guidelines were also included in the kit.

Third, the Task Force prepared a communications plan to assist in informing the media and keeping them apprised of the progress being made in the Cooperative Siting Process.

1.5 Formation of a Technical Advisory Committee

A Technical Advisory Committee was established which comprised members of the Low-Level Radioactive Waste Management Office, Atomic Energy Control Board staff, Environment Canada, the Uranium and Nuclear Energy Branch of Energy, Mines and Resources Canada, the Ontario Ministry of the Environment, the Canadian Transport Commission, the Department of Transport and the Ontario Ministry of Transportation and Communications. The committee's role was to provide the Task Force and interested communities with information and guidance on safety standards, acceptable waste management options and licensing requirements.

Chapter two

Phase one: Establishing guidelines

2.1 The need for guidelines

Opting for co-operation set out a five-phase siting process framework. Although this framework was quite detailed in specifying the steps to be followed and the roles of the key participants, there were certain features which required further elaboration for the Cooperative Siting Process to be effectively implemented. These included impact management guidelines, criteria and procedures to be used to eliminate unsuitable areas/sites from further consideration and the steps to be followed in setting up Community Liaison Groups. Thus, the Task Force began by establishing guidelines for each of these areas.

One of the key principles set out in *Opting for co-operation* states that the community should be a partner in problem-solving and decision-making. Accordingly, each set of guidelines was put forth as a draft document and finalized in consultation with the interested communities, public interest groups, and federal and provincial government officials to allow for incorporation of their preferences and concerns.

2.2 Impact management guidelines

Impact management involves actions or strategies to handle the effects of the proposed low-level radioactive waste management facility on the economic, demographic, housing, public service, fiscal, environmental and social aspects of a community.

Safeguard one of the Cooperative Siting Process states that:

An explicit, up-front impact management policy will be used to ensure that all communities are aware of the range of options available to them.

The Task Force believed it was essential for all participating communities to be provided at the outset with information on impact management options so they would not unknowingly overlook possible measures.

The impact management guidelines were developed in this context.

In February 1989, the Task Force convened an impact management workshop in Toronto which provided it with the opportunity to discuss current experience in developing impact management policies and programs. (See Appendix A for a list of attendees.) As a result of this workshop and other consultations with experts in the fields of facility siting and impact management, the Task Force established impact management guidelines which defined, in broad terms, examples of measures that have been applied in other situations and that would be available to participating communities. These can be divided into four broad categories:

- **mitigation measures** which are applied in the design, construction and operation phases of facility development to prevent or reduce potentially negative effects
- **compensation measures** which are taken to offset effects that cannot be addressed acceptably with mitigation measures or to enhance potential local benefits
- **contingency measures** which are taken to aid in the detection of potential problems and in the timely response to unanticipated effects
- **community relations measures** which are taken to promote effective and ongoing two-way communication and joint problem-solving so that issues and concerns that might arise during facility construction and operation are quickly resolved.

The impact management guidelines set out, for each category of measure, examples that have been applied in other facility siting situations. These examples included, where possible, contacts and their addresses, enabling the reader to obtain further information. In addition, the guidelines briefly outlined how the impact management strategy will relate to both project assessment in the fourth phase of the Process and the development of a formal agreement in the fifth. The intent

was to clarify that impact management measures will, in fact, be identified before the community is asked to vote in a referendum at the end of Phase four.

In March 1989, draft impact management guidelines were made public and distributed at the regional information sessions and the community information meetings held in Phases two and three, respectively, and to various federal and provincial agencies and public interest groups. During the third phase, a meeting devoted to impact management was held with each of the fourteen interested Community Liaison Groups, to allow members and residents the opportunity to discuss the guidelines in detail with the Task Force. The Task Force emphasized that impact management is a creative problem-solving process and that the measures adopted would vary, as each community attempts to deal with its specific potential impacts. Thus the guidelines, which document current experience and precedents, should be regarded as illustrative of the range of applicable options.

No revisions to the draft impact management guidelines resulted from the public review.

2.3 Site elimination criteria

Principle five of the Cooperative Siting Process states that:

The Siting Task Force responsible for the implementation of the Process must ensure that the safety of the environment and human health are not compromised for any reason.

A key means of achieving this objective is to eliminate from consideration at the outset, any areas/sites deemed "unsuitable" for a proposed facility. The Task Force developed a set of site elimination criteria for this purpose.

In November 1988, draft site elimination criteria were circulated for public comment. In March 1989, the criteria were revised and a new draft report was distributed, for comment, at both the regional information sessions and the community information and consultation meetings. In addition, in September 1989, the Task Force convened a workshop involving its technical advisors and other professionals experienced in site elimination to obtain their input for further refinement of the criteria. (See Appendix B for a list of both the respondents and workshop attendees.)

The March 1989 draft site elimination criteria specified two levels of criteria: Level One which were absolute constraints (for example, if an area exhibited the characteristics contained in any of the criteria, it would automatically be eliminated); and, Level Two which allowed for the exercise of judgement (for example, if an area exhibited the characteristics evident in any of the criteria, its elimination would depend on the significance, or the extent of the constraint posed as determined by the community). None of the Level One criteria could be deleted by a community as the Task Force considered these essential; however, criteria could be added. Unlike Level One, Level Two criteria were not absolute constraints. Communities could alter the criteria in any way they felt was appropriate to reflect local values and concerns. For example, communities could add criteria which would serve to eliminate from consideration valued eco-systems and other environmental and social amenities.

In setting Level One criteria, the Task Force was guided by federal and provincial land-use policies and regulations, as well as the advice it received from its technical advisors and the workshop. Five Level One criteria were identified, as follows:

- 1 Aggregate resources that could be identified by Ontario's Ministry of Natural Resources and the municipality as requiring protection, pursuant to the provincial Mineral Aggregate Resources Policy Statement.
- 2 Federally or provincially designated Parks, existing and proposed.
- 3 Natural areas significant to the Province, such as: lands containing flora or fauna which are rare or unique to the Province; critical wildlife habitats; wetlands; Areas of Natural and Scientific Interest (ANSI's); Carolinian Canada sites; or other designated sensitive natural areas in their federal, provincial and regional context.
- 4 Geologically unstable lands including: lands subject to earthquakes and faulting, and lands prone to flooding.
- 5 Sites containing federally - or provincially-valued archaeologic, historic, or cultural resources.

In identifying Level Two criteria, the Task Force took into consideration the site elimination criteria applied in other facility siting situations; and, the range of technological options available for low-level radioactive waste management. Level Two criteria stated that it may not be appropriate to locate a low-level radioactive waste management facility at a site that is on or near:

- 1 A major water body; a major recharge or discharge area which serves local or regional needs for water supply or recreation; or in an area that does not provide the hydrogeologic conditions appropriate to any of the available waste management technologies.
- 2 Prime agricultural land, or in close proximity to prime agricultural land such that the site could have an adverse impact on the viability of local agricultural operations.
- 3 Sensitive population concentrations that may be disrupted by the noise, truck traffic, or other effects associated with the day-to-day operation of the facility.
- 4 Areas that would result in the loss of regionally and locally important natural resources, such as managed timberlands or wildlife resources, either on private or Crown lands.
- 5 Regionally- or locally-valued archaeologic, historic, or cultural resources.
- 6 An inaccessible area, or any area with physical constraints, that might preclude construction of access to a major transportation route, at reasonable cost.
- 7 A site which may have an impact upon any other feature or resource that the community considers to be significant.

Public review of the criteria, and in particular the workshop, provided positive feedback, although a number of revisions to the March 1989 draft criteria were suggested. Most of those concerned editorial changes to improve clarity. There was one substantial suggestion which was not adopted. Concern was expressed that there may be certain natural and cultural features (archaeological sites) which, while not protected by park status or some other official designation, are

of sufficient provincial or local importance to warrant protection and should be given prominence in Level One. Given that the environmental assessment studies to be conducted in Phase four would undoubtedly eliminate additional areas, as more detailed information on valued features was obtained through field investigations, this concern was not incorporated in the Level One criteria.

Taking these concerns into account, in January 1990, the Task Force revised and issued another draft of the site elimination criteria. As a result, Criterion four in Level One was divided into three separate criteria addressing seismic activity, flooding and stability. Revisions to Level Two criteria were editorial only. A new section describing desirable characteristics of "potentially suitable areas" was added to assist interested communities, once they had completed site elimination, in identifying those tracts of land most appropriate for the different waste management technologies. It was stated that the degree to which a site is suitable depends on, (1) the technology preferred by the community, and (2) the physical ability of the site to achieve the standards and levels required by the regulatory agencies, so that the safety of human health and the environment is not compromised. Interested communities were encouraged to begin identifying both the preferred technological options and the areas most suitable for the proposed facility. It was emphasized, however, that thorough environmental assessment studies would have to be conducted in Phase four to determine whether, in fact, preferred technologies and areas are environmentally sound.

In February and March 1990, workshops were held in the communities that remained in the consultation program to allow for discussion on the criteria with the Task Force; and, if the Community Liaison Groups wished, they could receive assistance from technical experts in applying them. (Three communities opted out before the workshops were held.) The site elimination criteria were finalized by the Community Liaison Groups with each deciding what, if any, criteria to add to Level One and what to change to Level Two. Subsequently, each Community Liaison Group produced and included in its final report a definitive set of site elimination criteria tailored to its community's values and preferences.

2.4 Community Liaison Group guidelines

Safeguard four of the Cooperative Siting Process states that:

A broadly-based Community Liaison Group will be established to work with the Siting Task Force and local officials.

Opting for co-operation required establishing Community Liaison Groups not only to facilitate community participation, but as a means of ensuring that decisions made in the Cooperative Siting Process reflected the interests of the whole community. A set of guidelines was prepared which elaborated on the purpose, mandate and tasks of the Community Liaison Groups and outlined the procedures the Task Force would follow in forming the groups.

The Task Force determined that three types of communities would be involved in the Cooperative Siting Process: volunteer, source (where low-level radioactive wastes are presently located) and access-route. Community Liaison Groups for each potential volunteer and each source community were formed in the third phase. To represent the access-route communities, Community Liaison Groups will be established in Phase four, once potential host communities have been identified.

In Phase three, each potential volunteer Community Liaison Group had three key tasks:

- to work with the Task Force to develop and implement a community consultation program
- to work with the Task Force, its Municipal Council and government agencies to eliminate unsuitable sites from further consideration
- to prepare and make public at the conclusion of the phase, a report presenting its findings and recommendations to the Task Force and its Council regarding further community involvement in the Cooperative Siting Process.

The Task Force envisaged that the potential volunteer Community Liaison Group would work with it, in Phase four, to identify advisors and develop terms of reference for commissioning studies. Further, they would work together to develop site selection criteria and impact management requirements, organize the involvement of residents in the design of environmental assessment studies and review the results of the studies.

The source Community Liaison Group's main task was to facilitate community involvement in preparing an action plan that sets out a strategy for improved management of the low-level radioactive wastes within its municipality. In developing action plans, residents in source communities would become aware of the possible effects of waste removal and the full range of remedial activities including the potential for management within their municipalities. The waste management strategies adopted by those communities will assess the need to relocate waste volumes. If removal is required, the volume of wastes to be transported to a waste management facility will need to be determined. The latter is particularly significant because waste management activities in the source communities will not be without impacts, and costs will be significant. These action plans will also be used to determine the scale and type of management facility that may be required in the potential volunteer community.

The development of source community action plans involved three stages:

- Stage A: Brief Municipal Council on the need to develop an action plan and establish a Community Liaison Group.
- Stage B: Conduct community information sessions on the nature of the waste accumulations, management requirements and possible options.
- Stage C: Prepare guidelines for cleanup and rehabilitation.

In Phase three, the source Community Liaison Groups focused their activities on Stage B.

Access-route Community Liaison Groups' primary task will be to work with the Task Force, in Phase four, to develop a transportation-related impact management plan that addresses safety requirements, contingency measures and claims resolution/compensation procedures.

In order to be selected as a member of a potential volunteer or source Community Liaison Group, an individual had to meet the following three criteria:

- be a resident of the community
- represent one or more of the broad interests of the community
- have a record of involvement in community affairs.

Elected members of local Council were excluded from membership in the Community Liaison Group for two reasons. First, the primary objective of the Cooperative Siting Process was to gain "community acceptance" of the siting proposal. Because Council was the decision-maker of record in the Process, it was necessary to ensure that its decisions reflected not only its corporate interests but also those of the whole community. Therefore, it was decided that the Community Liaison Group would be accountable to, but independent of, Council and the Task Force. Second, given their position, it would be inappropriate for Councillors to be involved in developing the recommendations on which they would ultimately be asked to vote. As it turned out, all but one local Council welcomed the opportunity to stay in the background and let the Community Liaison Group and the Task Force consult with local residents. Members of the Elliot Lake Council were concerned that the provision eliminated them from involvement in Phase three until the very end, but when they were assured they could participate as members of the public, they concurred. In soliciting members for each Community Liaison Group, the Task Force sought nominations from local Council and community service groups and associations. Further, advertisements requesting nominations were placed in the local newspapers.

In July 1989, draft Community Liaison Group guidelines were made public and discussed with those Municipal Councils interested in forming Community Liaison Groups. In August 1989, as a result of these discussions, the guidelines were revised and reference to Council's participation in making the final choice of Community Liaison Group members was deleted. Several Councils had expressed concern that their involvement in selecting the Community Liaison Group members might compromise the perceived independence of the group. Thus, the Task Force, alone, made the final decision on membership of the Community Liaison Groups.

2.5 Observations

Although the time and effort expended in developing draft guidelines was considerable, it was essential to have a clear set of procedures to conduct the implementation of key aspects of the Cooperative Siting Process. Once the second phase began, the Task Force was able to provide answers to questions regarding impact management options, site elimination criteria and the formation of Community Liaison Groups. Without such a well-thought-out response, the credibility of the Process and confidence in the capabilities of the Task Force would undoubtedly have been jeopardized.

Issuing the guidelines as draft documents and obtaining public input for their refinement was also important. It enabled the Task Force to consider factors that it might otherwise have overlooked, which proved especially significant regarding the Community Liaison Group guidelines where feedback on local socio-political sensitivities was key in ensuring that the procedure was unbiased. And, in the case of site elimination criteria, it allowed the interested communities to clarify and act on their own values and preferences. Further, the Task Force wanted it evident right from the outset that it was adhering to the principles of the Cooperative Siting Process, particularly that the community be a partner in problem-solving and decision-making.

Chapter three

Phase two: Regional information sessions

3.1 Background

On November 30, 1988, the Siting Task Force sent letters to all 850 organized municipalities across Ontario introducing itself and describing the process for siting a low-level radioactive waste management facility in the province. This was followed up on February 21, 1989 with an invitation to all municipalities to send two representatives each to attend one of the regional information sessions which were held throughout Ontario. (See Appendix C for a copy of the letter.) The Task Force also notified federal and provincial members of Parliament. The purpose of the sessions was to provide an opportunity to learn about the Cooperative Siting Process and the need for improved management of the historic low-level radioactive wastes. The voluntary nature of participation in the Process was emphasized and the Task Force assured representatives that attendance in no way constituted a commitment. (See Table 2.)

3.2 Format and content

In upholding the principle that all meetings related to the Cooperative Siting Process be open to the general public, the regional information sessions were publicized in local newspapers and on radio and television.

A formal presentation outlining the need for improved management of the historic low-level radioactive wastes, the Process principles and safeguards and some of the available technologies was followed by a 15 minute slide show. The meetings concluded with a question and answer period. Questions raised at the sessions related to the:

- mechanism for community involvement
- definition of community
- measurement of community acceptance

Table 2

Regional information sessions

Date (1989)	Location	Number of registrants	Number of attendees
March 30	Thunder Bay	24	27
April 6	Kingston	20	27
April 7	Ottawa	49	97
April 13	Peterborough	25	77
April 14	Barrie	43	48
April 18	London	58	65
April 20	Timmins	14	20
April 21	Sudbury	25	44

- characteristics and hazards associated with low-level radioactive wastes
- transportation concerns
- disposal of ongoing low-level radioactive wastes
- type and number of jobs that would be involved in the construction and operation of a low-level radioactive waste management facility
- impact on tourism.

Comprehensive information kits were distributed to all those in attendance and the Task Force members gave interviews to the local media.

The Task Force advised participants of its willingness to go to individual communities to repeat the information sessions emphasizing that it would not go in unless **invited** by the local Council; that no community would be asked to volunteer to accept a facility until the end of Phase four; and that a community poll or referendum would be held before Council would be asked to pass a resolution stating its willingness to proceed into Phase five.

In all, over 400 participants, comprised mainly of municipal officials, attended the sessions. Travel expenses incurred by the municipal officials were reimbursed by the Task Force, in accordance with Safeguard five.

3.3 Observations

Following the regional information sessions, 26 municipalities requested either a meeting or further information from the Task Force. This degree of community interest in the Cooperative Siting Process exceeded the expectation of the Task Force.

Hence, the regional information sessions were effective in getting the serious attention of a number of communities who might subsequently volunteer to site a low-level radioactive waste management facility through a process they could trust. However, the Task Force was concerned that most of the communities expressing interest in the Cooperative Siting Process were located far from the source of the wastes.

While the Task Force was well prepared to answer questions on the Process, it was less able to provide detailed information on technology, employment and impact management. Unlike the traditional siting process where the proponent develops a specific proposal before consulting the public, the Cooperative Siting Process' detailed project specifications are to be developed jointly with participating communities in Phase four. Many of the people who attended the regional information sessions were expecting the Task Force to put forward a specific proposal and were a bit disconcerted when told this would come later. Still, many others appreciated the opportunity the Process offered for direct community involvement in facility planning and design.

In Phase two, the media were generally interested and either neutral or favourable to the Process. Professionals, particularly planners, were predominantly intrigued and even enthusiastic about the Process and the possibilities for its application in the siting of other types of facilities.

Some of the local politicians appreciated the voluntary nature of the Process and the right to "opt out" at any time without penalty. Some were concerned, however, with both the unrealistic expectations and undue anxiety that might arise once residents realized there could be a facility sited in their community.

Chapter four

Phase three: The Siting Task Force

information and consultation

program

4.1 Purpose and objectives

The Cooperative Siting Process was based on active participation of communities in joint problem-solving and decision-making with the Task Force for siting a low-level radioactive waste management facility. However, the Task Force does not equate "community" with Municipal Council. While Municipal Council stood as the decision-maker of record, it was essential that Council's decision in the facility siting process be based on a full understanding of the interests of the whole community. Residents were given every opportunity to become involved in the Process to express their views and have their concerns addressed. To ensure the community decision was an informed one, this placed considerable emphasis on a detailed community-based information and consultation program. This level of consultation began in Phase three after completion of the regional information sessions.

Phase three proceeded in two stages, each with its own set of objectives. In the first stage, the Task Force's objective was to provide potentially interested communities with information on the low-level radioactive wastes requiring improved management and the Cooperative Siting Process, to assist them in determining whether they wanted to continue. When such an interest was expressed, the Task Force then established a Community Liaison Group.

In the second stage of Phase three, each Community Liaison Group, with the assistance and support of the Task Force, developed and implemented an information-gathering and consultation program suitable to its community. At the end of the program, each Community Liaison Group prepared a report for its Council and the Task Force, recommending whether or not the community should proceed into Phase four.

4.2 Background

As previously indicated, following the eight regional information sessions, Councils from 26 municipalities invited the Task Force to conduct similar sessions in their communities (Table 3). Five municipalities – the Township of Chisholm, the Township of Sydney, Fort Frances, Oshawa and Faraday – withdrew their requests, for various reasons, before the introductory sessions were held. In the cases of Chisholm, Fort Frances and Faraday, strong opposition by local residents and neighbouring communities led to Councils' decisions. Because of increasing interest in other projects, the Township of Sydney declined to meet with the Task Force. The Oshawa Council wanted to ensure a meeting was held in the Durham area; subsequently, when they learned that the neighbouring community of Newcastle was involved, they withdrew their request.

4.3 Initial information meetings

The Task Force held information sessions with Council and members of the public in the remaining 21 municipalities. Each community was advised that, if it wished to further explore the possibility of establishing a facility, its Council should pass a resolution stating its interest in remaining in the Process and, accordingly, request that a Community Liaison Group be formed. At later meetings with local Councils, the Task Force discussed the procedure for forming a Community Liaison Group, its mandate and role of its members.

The Task Force made every effort to ensure that communities advertised the information meetings. Announcements with the meeting dates included were placed in local papers; as well, most Councils announced the dates during their meetings.

Table 3**Status of the 26 interested municipalities at the outset of Phase three**

Communities A:	Communities B:	Communities C:	
Fort Francis	Bicroft	Atikokan	Newcastle
Oshawa	Dryden	Deep River*	Port Hope
Chisholm	Kirkland Lake	Ear Falls	Red Lake
Faraday	Nakina	Elliot Lake	Township of
Sydney	Terrace Bay	Geraldton	James-Elk Lake
	Township of McGarry-	Hope Township	Upsala
	Virginiatown	Horne Payne	
	Shedden	Manitouwadge	
		Mattice-Val Côté	

Communities A: withdrew before the introductory session was held.

Communities B: withdrew following the introductory information sessions.

Communities C: continued into Phase three; each formed a Community Liaison Group.

*Represented four municipalities: Deep River, Chalk River, The United Townships of Ralph, Wylie, Buchanan and McKay and the Townships of Head, Clara and Maria.

Attendance by Council, the public, and media at the information meetings varied with each community. Further, several meetings were well-attended by residents of surrounding areas.

Meetings were lengthy with considerable discussion following the presentation. Although the concerns were expressed differently, the same set of issues was constantly raised, as follows:

- the costs and risks associated with transporting low-level radioactive wastes from the Port Hope area to any of the communities. Three interrelated issues were tied in with this concern. First, the rationale for waste removal was seen to be politically motivated; second, the south was shipping its wastes to the north; and third, the access-route communities would have to accept an imposed risk
- the number of long-term jobs that would be available through the facility siting
- the possibility of accepting ongoing waste; some communities were in favor of considering this while others were strongly opposed

- the long-term health effects from exposure to radiation associated with low-level radioactive waste. Underlying this concern was the controversy regarding the potential long-term health effects associated with low levels of radiation, an issue exacerbated by the no-threshold assumption on radiation risk
- tourism impacts resulting from the perceived stigma associated with siting a facility.

Meeting attendance and tone varied with each community; for example, in Kirkland Lake, Task Force members encountered a group of approximately 100 protesters outside the meeting hall. The group was composed of representatives from Victims of the Mining Environment, the Youth Federation Movement and the Coalition for a Nuclear Free North. Buttons and posters had been distributed throughout the town and a petition had been circulated. Media coverage was extensive and included a number of letters to the editor of the local newspaper. By contrast, the meeting held in Ear Falls attracted six members of the public and had no media representation.

Seven municipalities declined further participation in the Cooperative Siting Process following the community information meetings, as indicated in Table 3. Seventeen municipalities continued, requesting that the Task Force assist them in establishing Community Liaison Groups. Four of the municipalities (Deep River, Chalk River, The United Townships of Rolph, Wylie, Buchanan and McKay and the Townships of Head, Clara and Maria) requested that one Community Liaison Group be formed to represent all of them. In total, fourteen Community Liaison Groups were formed, the locations of which are illustrated on the map in Figure 2.

4.4 Formation of Community Liaison Groups

The Community Liaison Group was a key feature of the Cooperative Siting Process as it ensured that the community was a full partner in problem-solving and decision-making. The Community Liaison Groups played an influential role in bringing forward residents' views. As previously described, both volunteer and source communities were involved in Phase three.

The formation of the Community Liaison Groups proceeded in accordance with guidelines established by the Task Force. Upon receipt of a resolution requesting that a Community Liaison Group be formed, the Task Force sought nominations from local Councils and

community service groups and associations. Also, advertisements were placed in the local newspapers to solicit self-nominations from interested individuals. Those ads briefly outlined the role of the Community Liaison Group and provided residents with a toll-free number to bring forward nominations.

Once all nominations had been received, nominees were interviewed by telephone to determine if they were interested in becoming Community Liaison Group members and if they met the basic membership requirements. Candidates had the opportunity to ask questions and were given an indication of the time commitment that would be involved in serving on the Community Liaison Group.

In selecting members for the groups, the Task Force attempted to ensure that all identifiable community interests were represented. The list of Community Liaison Group members was then published in the local newspaper for a two-week period to allow residents to identify gaps in representation.

By the end of November 1989, ten Community Liaison Groups were established; one other group was formed in January 1990; one in March 1990; and, the last two in April 1990. Table 4 describes the composition of the Community Liaison Groups.

Table 4

Community Liaison Groups

Community	Date of Formation	Size of CLG*	Population	Interests represented
Atikokan	Nov 6	10	4,250	business, forestry, homemakers and tourist outfitters
Deep River Chalk River The United Townships of Rolph, Buchanan, Wylie and McKay Head, Clara and Maria Townships	Nov 15	11	4,166 1,000 1,758 262	business, forestry, health care, long-time residents, science and young families

Community	Date of Formation	Size of CLG*	Population	Interests represented
Ear Falls	Nov 8	10	1,313	business, forestry, seniors, social and sports clubs, teachers and tourism
Elliot Lake	Nov 16	15	16,500	business, homemakers, indigenous people, mining, seniors, sports clubs and teachers
Geraldton	Nov 16	14	2,528	business, forestry, health care, seniors and teachers
Hornepayne	Nov 15	12	1,400	business, homemakers, rail industry, seniors and teachers
Manitouwadge	Nov 13	11	4,700	homemakers, mining and teachers
Mattice-Val Côté	Nov 15	9	950	business, church groups, homemakers, seniors, social and sports clubs and volunteer firefighters
Port Hope	Nov 9	10	10,243	business, development organizations, health care, homemakers, industry, social and sports clubs and teachers
Red Lake	Nov 7	9	2,228	business, social clubs, teachers and tourism
Township of James	Mar 1	12	513	business, forestry, homemakers, mining, seniors, social and sports groups, students and teachers
Upsala	Jan 24	12	400	cottagers, forestry, indigenous people, seniors, teachers and tourism
Newcastle	Apr 10	10	42,700	business, farming, teachers, trades and union members
Hope Township	Apr 9	10	3,636	business, farming, seniors, social clubs and teachers

*At formation

Figure 2

Map of volunteer/source communities



A Community Liaison Group was not formed in the City of Scarborough since the disposal of the small volume of low-level radioactive waste located in that community was already the subject of an agreement between the federal and provincial governments.

Every Community Liaison Group member was paid a nominal honorarium based on an assessment of the average rate paid to municipal committee members, and was reimbursed for expenses in accordance with the federal government's Treasury Board Guidelines.

Each Community Liaison Group elected a chairperson. A facilitator, a resident of the local area, was hired by the Task Force Secretariat to provide administrative support to the Community Liaison Group; and, a two-person Task Force/Secretariat team was available to advise each group on process matters and to assist with consultation efforts.

The Task Force ensured that a fund was established for use by the Community Liaison Group in setting up an office in the community. The office functioned as a drop-in center and was the location for reference material and other information relating to the Cooperative Siting Process, the nature of the wastes and the siting of a low-level radioactive waste management facility.

To accommodate the large number of telephone calls received by the Task Force from community members and to facilitate access to additional information, the toll-free number at the Secretariat office in Ottawa was continued. The toll-free number was widely used by both Community Liaison Group members requesting information and members of the public who wished to more directly voice their concerns

4.5 Observations

The outcome of any consultation program largely depends on the ability and willingness of communities to participate fully and without impediment in all steps of the cooperative decision-making process. As both the Task Force and the Community Liaison Groups learned, the path towards making these kinds of decisions can reveal many challenges along with some very rewarding experiences.

It was never anticipated that so many Community Liaison Groups would be established in Phase three. Fortunately, arrangements for administrative support to the Task Force were flexible enough to allow for additional resources, as required. As expected, the capabilities of the Community Liaison Groups varied and the Task Force recognized that it was important to move at each community's pace rather than force them all to adhere to the same activity schedule. Further, the Task Force recognized that it could not always strictly adhere to its own agenda. If a Community Liaison Group had concerns that it wanted to address, its agenda came first and the Task Force's second. Once its concerns were addressed, the Community Liaison Group was more able and willing to comply with the program outlined by the Task Force. This involved rescheduling some meetings in order to accommodate specific requests; however, the Task Force believed the extra effort was worthwhile.

Because several communities were examining the possibility of volunteering for a proposed facility, a few people put forward the position that the Cooperative Siting Process was competitive rather than cooperative.

The Task Force believed the Process was both. Since communities were not forced to participate and decisions were made jointly with the Task Force, it was cooperative. It was also competitive in that more than one community may be interested in hosting a proposed facility. However, unlike conventional siting processes, it was a positive competition. In conventional processes, where two or more communities are unwillingly "selected" as possible sites for a facility, the communities invariably become pitted against each other. Each tries to persuade the project proponent to eliminate it from consideration and select the other. This kind of confrontation has not occurred to date in the Cooperative Siting Process. Indeed, the Community Liaison Groups networked—sharing information and ideas and learning from each other's experience, as exemplified by the Thunder Bay meeting of chairpersons and facilitators.

This is not to say that the Cooperative Siting Process was without controversy. For example, a group within a community of 11,300 assembled a petition of 8,600 signatures immediately following its initial information meeting. Although it was apparent that the petition involved people from outlying areas and that it was largely in response to preconceived notions on nuclear and other ongoing area issues, the Council withdrew from the Process. Generally, however, the level of confrontation exhibited by communities participating in the Process was significantly less than that which accompanied previous siting efforts of low-level radioactive waste management facilities. Much of the controversy occurred at the beginning of the community consultation phase when residents were without full information on either the Cooperative Siting Process or the nature of the waste management problem. Once Community Liaison Group members realized participation in the Process was voluntary and their community could opt out at any time, they were willing to pursue pertinent information and make informed decisions on the potential for facility siting in their community. Unfortunately, there was not sufficient time for the entire community to come to that same realization.

Chapter five

Phase three: Community Liaison Groups' consultation programs

5.1 Purpose and objectives

Each Community Liaison Group was required to develop, in cooperation with the Task Force, a consultation program which would provide residents with an opportunity to learn about:

- the Cooperative Siting Process
- low-level radioactive wastes
- the Task Force's priorities for waste management
- possible technologies for improved management
- the kinds of impact management or compensation measures previously used in facility siting processes to offset unavoidable impacts and to provide communities with a net benefit.

Through this program, the Task Force anticipated that the Community Liaison Group would be able to determine the level of community support for going forward into Phase four of the Process.

Each Community Liaison Group, while collaborating with the Task Force, selected the approach it believed would be the most effective in stimulating community discussion on the issues, concerns and possible benefits associated with siting a low-level radioactive waste management facility. Variations in land area, population size, awareness of low-level radioactive waste, availability of information outlets and interest in the project were some of the main determinants in tailoring the consultation programs.

This chapter describes the communities' consultation programs and discusses the issues brought forward. At-a-glance profiles briefly summarize the specific concerns and recommendations.

In addition to the profiles provided in this section, each Community Liaison Group prepared a final report describing in detail its consultation program, results and recommendations.

5.2 Information packages

The Task Force prepared a series of information packages relating to low-level radioactive waste management and the Cooperative Siting Process for presentation to the Community Liaison Group and the public (See Appendix D). Presentation of the information packages provided a starting point for stimulating discussion on the nature of low-level radiation and the wastes, related health and safety issues and government regulations. One of the information packages described suitable waste management technologies. In another, each community was presented with a series of site selection criteria, which the group helped to apply to identify suitable areas, within the municipal boundaries, for a waste management facility. The information package that followed discussed the types of impact management and compensation measures that the community might consider if it decides to host a facility.

Six information packages were prepared, of which five were developed by the Task Force. Package four "Health and Safety and Regulatory Requirements" was prepared and presented by the Atomic Energy Control Board staff. Information for the packages was obtained from a variety of sources including government and regulatory agencies and engineering firms. Table 5 provides a list of the information packages presented.

Table 5**Information packages**

Session	Title
1	Community Liaison Group Workshop
2	Radiation, Health and Safety
3	Waste Management Technologies
4	Health and Safety and Regulatory Requirements
5	Site Elimination Criteria
6	Compensation, Local Benefits and the Environmental Assessment Process

In early November 1989, meetings to present and discuss the first information package began. This introductory session provided information on the Task Force, its mandate and the role of the Community Liaison Group. Community Liaison Group members were briefed as to the objectives of Phase three including their responsibilities. Members were asked to identify what they felt would be some of the key issues associated with siting a low-level radioactive waste management facility in their community. Further, the roles of technical experts and community-selected advisers in helping the Community Liaison Group address these matters were discussed. The Task Force and the Community Liaison Group then developed a schedule for both the remaining five information packages and the public consultation activities. The information packages were mainly presented sequentially as planned by the Task Force; however, there were some communities who, because of their familiarity with the waste issue, or particular situation, requested either a different presentation order or that only some of the presentations be made. Meetings were generally held weekly from November 1989 through April 1990.

Next, the Task Force provided examples of some of the techniques that could be used to encourage the community to learn about the management of low-level radioactive wastes and the Cooperative Siting Process.

The techniques ranged from ways to distribute and collect community information to more direct and personal consultation approaches. In the weeks that followed, each community developed its own unique consultation program reflecting its individual character.

With the exception of "Health and Safety and Regulatory Requirements," the information packages were presented by either the Task Force, its Secretariat, technical advisors or consultants hired specifically for that purpose. By the end of February 1990, most of the communities had completed the information presentations. In addition to the presentations given to the Community Liaison Groups and general public, some were given to students, special interest groups, various clubs and associations and at kitchen table meetings. The benefits from these smaller meetings were twofold: first, a broader range of individuals was given the opportunity to increase their understanding of low-level radioactive wastes and the Cooperative Siting Process; and second, the Task Force and the Community Liaison Group had the opportunity to hear the concerns of those unable to attend regular meetings.

As a matter of policy, and to avoid any perception of "back room" dealings, the Task Force did not hold in camera meetings. In accordance with this policy, the Task Force required that all Community Liaison Group meetings be widely advertised and open to the public.

Each information package was designed to be presented in one session with the exception of "Site Elimination Criteria" which required several sessions to complete. In the first "Site Elimination Criteria" session, a Task Force member, jointly with the Community Liaison Group, reviewed the Level One and Two criteria designed to exclude unsuitable areas from further consideration. Technical consultants were selected mutually by the Task Force and the Community Liaison Group. The consultants were requested to apply the criteria using available information and in consultation with the Community Liaison Group. In addition, they were asked to identify, where feasible, suitable technologies for a low-level radioactive waste management facility. The consultants then presented the results to the Community Liaison Group for review with the community. Although there were minor variations among the communities, the application of site elimination criteria generally followed this format.

5.3 Guest speakers

In addition to information presentations, the communities identified speakers whom they felt could help them better understand the issues surrounding low-level radioactive waste management. Table 6 provides a list of those speakers. A more complete description including speaker topics and the communities to whom they presented is found in Appendix E. The speakers, who represented different viewpoints, were chosen by the Community Liaison Group to address such topics as radiation health risks, waste management and environmental impacts. Speakers were requested to focus their discussions on issues relating to low-level radioactive waste management. Regulatory agency officials from the Atomic Energy Control Board, the Department of Health and Welfare and Environment Canada discussed, respectively, the regulation of the nuclear industry, low-level radioactive waste management facilities and potential environmental impacts. Other guest speakers included representatives from the Canadian Nuclear Association; Cameco; several geotechnical consulting firms; and communities now storing hazardous and/or radioactive waste: Swan Hills, Alberta and Newcastle, Ontario.

Several speakers, representing groups formed to address concerns regarding low-level radioactive wastes and the nuclear industry, focused on the need for community control over facility siting and management. Should a community decide to accept the wastes, those speakers recommended that residents negotiate to ensure they have control from the design of the facility through construction and monitoring. Other issues discussed during those presentations included the risks from low-level radioactive waste spillage during transportation; the merit of moving the waste from communities which have benefitted from its production to areas which have not; and, the need for a better understanding of the health risks associated with low-level radioactive wastes.

Initially, panel discussions had been proposed for the community consultation program. Unfortunately, because of the large number of communities participating in the Process, the consultation program logistics and schedule did not allow for their inclusion. It was also recognized that panel discussions may create unnecessary conflict by pitting opposing views against one another, thereby limiting the opportunity for residents to have their concerns on low-level radioactive waste management addressed.

Table 6

Guest speakers

Speaker	Affiliation
Dr. E. Becker	Chief Scientist, Canadian Institute for Radiation Safety
Dr. R. Bertell	President, International Institute of Concern for Public Health
Dr. D. Chambers	Principal, Senes Consultants Ltd.
Dr. D. Charlesworth	Manager, Atomic Energy of Canada Limited
Dr. T. Cradduck	Chairman, Division of Nuclear Medicine, University of Western Ontario
Mr. G. Dolinar	Atomic Energy of Canada Limited
Dr. G. Edwards	President, Canadian Coalition for Nuclear Awareness

Speaker	Affiliation
Ms. M. Hanson	Swan Hills resident
Dr. P. Homenuck	Senior Partner, Institute of Environmental Research
Mr. R. John	Head of the Agreements and Monitoring Data Interpretation, Environment Canada
Mr. R. Krauel	Head of the Nuclear Program Section, Environment Canada
Mr. D. Main	Atomic Energy of Canada Limited
Mrs. D. Meyerhof	Chief of Environmental Radiation Hazards Division, Health and Welfare Canada
Mr. D. Netherton	Principal, Dennis Netherton Engineering
Mr. K. Philipose	Atomic Energy of Canada Limited
Mr. R. Pollock	Director, Low-Level Radioactive Waste Management Office
Dr. F. Prato	Department of Nuclear Medicine, St. Joseph's Health Centre
Mr. B. Reguly	Freelance journalist
Dr. M. Resnikoff	Senior Associate, Radioactive Waste Management Associates, New York
Mr. N. Rubin	Director of Energy Probe Nuclear Research
Mr. W. Sencza	Noranda, GECO Division
Mr. H. Sequin	United Steelworkers of Canada
Mr. H. Sloma	Lewiston, New York resident
Mrs. D. Spiller	Swan Hills Community Liaison Group member
Mr. J. Veldhuis	Newcastle resident
Ms. S. Weston	Environmental Design Officer, Environmental Contaminants Division, Environment Canada
Mr. I. Wilson	Vice-President, Canadian Nuclear Association

5.4 Lewiston and Port Hope area site tours

As part of a continuing effort to provide relevant information to the Community Liaison Groups, the Task Force organized a weekend tour in December 1989. Prior to that, the Secretariat consulted with Atomic Energy Control Board staff on the locations and suitability of low-level radioactive management facilities. It was decided that the Department of Energy facility in Lewiston, New York was a suitable example of a modern, well-managed facility. The Task Force then arranged a tour of this facility, the Port Granby and Welcome waste management sites and, the interim storage areas in Port Hope. Community Liaison Group members and Councils were invited to attend the tour to view, first hand, the location of the wastes, how they are managed and what a modern waste management facility looks like. Along with Task Force and Secretariat members, 114 people from 13 of the 14 participating Community Liaison Groups attended the tour. Briefing sessions were given by the Task Force; Bechtel National Inc.; members of the Low-Level Radioactive Waste Management Office; community leaders in Port Hope and Lewiston; and Cameco, who provided valuable background information on the Port Hope area waste management sites.

In Lewiston, Community Liaison Group members saw an attractive, small community on the Niagara River with an active tourist trade and a low-level radioactive waste management facility within its boundaries. Group members inspected the facility and met with and questioned local citizens and politicians, as well as officials and facility technicians.

In Port Hope, members visited the sites where historic low-level radioactive waste is located and presentations were given on the origins, composition, present management problems and future waste management options. Further, it provided an opportunity for the members to meet with local citizens and officials.

The tour proved to be an effective and credible educational experience for all concerned. Prior to the tour, very few of the Community Liaison Group members had a clear concept of the scale and nature of a low-level radioactive waste management facility, the immensity of a volume of 250,000 cubic metres or what living next door to a facility might entail. Understanding gained during the tour allowed the members to objectively evaluate the realities associated with a facility.

With the assistance of a video tape made of the tour, members were able to relay their experience to others in their community.

On June 9, 1990, the Lewiston facility tour was repeated for the benefit of the members of the Newcastle and Hope Township Community Liaison Groups who were unable to participate in December. A tour of the Port Hope area was not necessary because these two groups, who reside nearby, were already quite familiar with the waste situation and, as part of their consultation program, had visited the waste management sites located in their respective communities.

The tours were very effective and to achieve a similar level of impact using a program of guest lecturers and audio visual aids would have been extremely difficult.

5.5 Thunder Bay meeting

One of the most enlightening exchanges of ideas occurred on January 19, 1990, in Thunder Bay, Ontario, at a meeting of all the Community Liaison Group chairpersons and facilitators, along with Task Force and Secretariat members. Chairpersons summarized their groups' activities and the problems encountered. The meeting was productive with a considerable amount of information exchanged on the various methods of community consultation. Participants expressed the desire to have a similar meeting at a future date, however, there was not sufficient time.

5.6 Consultation activities

1 Newspapers

All Community Liaison Groups advertised their meetings in the local newspapers. Communities such as Red Lake, Atikokan and Geraldton went a step farther: each placed a full page information bulletin illustrating its consultation program. These information bulletins, published early in the consultation program, informed residents on the Community Liaison Group's role, the Cooperative Siting Process and the wastes in the Port Hope area. Residents who were unable to attend the meetings stated that the information was especially useful to them.

In addition to the information distributed by the Community Liaison Groups, the media in most of the communities provided residents with up-to-date reports on group developments. All Community Liaison Group meetings in Hornepayne, Atikokan, Red Lake, Port Hope, Elk Lake and Ear Falls received prominent media coverage. In papers such as the *Atikokan Progress* and *The District News* (Red Lake), the "Letters to the Editor" section provided space for a stimulating exchange of ideas. As well, most of the chairpersons were approached by their local newspaper reporter for interviews.

2 Video

The Elliot Lake, Mattice, Red Lake, Ear Falls, Manitouwadge and Atikokan Community Liaison Groups videotaped their information sessions and guest speaker presentations to serve as permanent records and as resource materials for those residents unable to attend the meetings. The Atikokan, Ear Falls and Port Hope groups used their local cable television networks to regularly broadcast the presentations and, as well, the notices and dates of their upcoming meetings. This gave those residents unable to attend the meetings an opportunity to keep abreast of the Community Liaison Group's progress.

The Task Force ensured that one presentation of each of the suitable information packages was videotaped for later use as reference sources by the Community Liaison Groups. The presentations were taped in Deep River because of proximity to the Secretariat office and availability of video production crews. As discussed in Section 5.4, a videotape of the December 1989 Lewiston tour was also made available.

3 Television and radio

Community Liaison Group members in many of the communities were contacted by both television and radio station personnel. For example, two members of the Deep River Community Liaison Group were interviewed about their consultation activities by the local television station reporters. Reporters from CBC Radio in Thunder Bay conducted four separate interviews with Atikokan Community Liaison Group members.

4 Distribution of printed material

In addition to advertising meetings and disseminating information via the media, the Port Hope, Hornepayne, Atikokan, Red Lake, Elk Lake, Manitouwadge and Upsala groups distributed flyers or sent letters to clubs, associations and retail stores, describing the Cooperative Siting Process and the purpose of the Community Liaison Group. At a later stage in its consultation program, the Deep River area group mailed out a pamphlet of updated information including their site elimination results and the technological options under consideration. The Port Hope group prepared and distributed to all residents a booklet entitled, "Let's Get the Problem Solved." The Manitouwadge group distributed a question and answer sheet on concerns regarding the Process and the low-level radioactive wastes. Minutes of Community Liaison Group meetings and summaries of presentations in Upsala were mailed out weekly to local residents. Because most of the tourist outfitters in Ear Falls were unable to attend meetings due to the large number of sports shows held during the winter months, information kits were sent to them to ensure they had access to material on the Cooperative Siting Process.

Further, newsletters were prepared and distributed by the Geraldton, Deep River and Ear Falls groups to keep residents abreast of activities.

5 Presentations to the community

To involve as many residents in the consultation process as possible, meetings with organized groups were arranged by either their representative on the Community Liaison Group or through letters and telephone calls. In most communities, presentations were made to groups such as the Lions Club, the Hunters and Anglers Association and the Catholic Women's League. In addition, members in more than half of the communities gave presentations to the local high school to obtain the views of students.

6 Open houses

The Elk Lake, Port Hope, Elliot Lake, Deep River and Manitouwadge groups held open houses to further describe the Cooperative Siting Process, the Port Hope area waste problem and the Community Liaison

Group's activities. The objective of the open houses in Deep River and Elliot Lake was to encourage broad participation in the identification of unsuitable areas and to obtain feedback on the information sessions. Residents were asked to identify the additional information they required and the speakers they would like to have make the presentations. With the exception of Port Hope, who attracted over 300 residents, attendance at the open houses was generally disappointing.

7 Information displays and suggestion boxes

The information displays set up in a few of the communities attracted more attention than the open houses. The Port Hope Community Liaison Group managed a display booth at a weekend-long trade show to provide residents with information on the Cooperative Siting Process and the waste issue. The Elliot Lake group set up a suggestion box at its mall display to obtain residents' opinions.

8 Informal meetings

Because of their relatively small populations, both the Elk Lake and Red Lake groups found that daily, informal meetings at the local coffee shop and conversations on a one-to-one basis were the most effective consultative approach.

9 Questionnaires

Questionnaires distributed by the Community Liaison Groups provided another means of receiving feedback on related concerns. Early in its consultation program, the Ear Falls group went door-to-door to deliver information on the Cooperative Siting Process and to listen to residents' views. The community was divided into geographic sections with a Community Liaison Group member responsible for each one. In addition to door-to-door interviews, the Ear Falls group designed a questionnaire to obtain community opinion. Approximately 15 percent of the questionnaires were answered and returned with the results used by the group to determine which speakers could best address the concerns of its community.

Similar questionnaires were designed by the Deep River, Port Hope, Manitouwadge and Atikokan groups and sent out at different stages to determine the groups' effectiveness in disseminating information to

the public. A variety of questions was asked, focusing on awareness of the low-level radioactive wastes requiring improved management and the work of the Community Liaison Group.

10 Polling

As they neared the end of their consultation programs, many of the Community Liaison Groups conducted community polls. They felt that the results of these polls would provide the information necessary to make the appropriate recommendations to their Councils. Members in Geraldton, Atikokan, Red Lake and Ear Falls conducted telephone polls to determine if residents were interested in continuing into Phase four of the Process. While the groups were aware that a formal community referendum would be held at the end of Phase four, they felt that any recommendation to Council, at the end of Phase three, should be substantiated with some form of poll.

The Upsala group decided to hold a vote prior to writing its final report. The secret ballot vote in Upsala, an unorganized municipality, was expanded to include cottage owners and others. Proxy voting was permitted for immediate family members over 18 years of age or for one non-family member. In the month preceding it, the vote was advertised in weekly mailouts.

The Manitouwadge Community Liaison Group conducted a live television phone-in session as an additional means of measuring community sentiment.

11 Logistics

As described earlier, a Community Liaison Group office was set up in each community, primarily as a central resource area. The office hours were arranged, in most cases, for the convenience of the community.

The Task Force ensured that a toll-free telephone number was established to enable community members to speak directly with the Secretariat. The Task Force and Secretariat were readily available to assist the participating communities throughout the consultation program.

5.7 Community profiles and specific concerns

The next section provides brief profiles of each of the 14 communities (including a coalition of four municipalities) who participated in the consultation program, as well as examples of issues and concerns raised during that period. Each Community Liaison Group prepared a final report to its Council and the Task Force summarizing the results of its consultation activities. Concerns common to most of the communities are summarized at the end of this section.

Atikokan at-a-glance



Location:	200 km. west of Thunder Bay on Highway 11
Population:	4,000
Area:	32,181 hectares
Employers:	Forest industry and Ontario Hydro
Tourism:	Canoe capital of Ontario
Parks:	Quetico Provincial Park
Transportation:	Road, rail and air

Atikokan is a vibrant community and Council is working hard to ensure it remains that way. Council has sought and promoted large scale projects that would create employment and bring money to the area, while local entrepreneurs have suggested placing more emphasis on small business.

Summer tourism provides some benefit to the community, especially to outfitters and guides, as thousands

of campers visit Quetico Park annually. Many people, initially attracted to the area by the park and the natural setting, have ended up settling there.

The concerns

The Community Liaison Group approached the issue of facility siting from a variety of angles. While some members identified ethical issues as being of paramount importance, for others, the main concerns related more directly to radiation, its effects and the ability to maintain a long-term facility. Further, the members agreed that new wastes should not be produced without sound management practices firmly in place. Some feared that accepting the Port Hope wastes would simply encourage poor management of the nuclear industry to continue and that public influence over waste production would be minimal. Some residents believed that the motivation for moving the wastes resulted from protests in the Port Hope area which, in fact, prevented management plans from being implemented locally. Thus, moving the wastes would simply endorse such protests as a way of transferring liabilities from politically strong areas to weaker ones. Other concerns included:

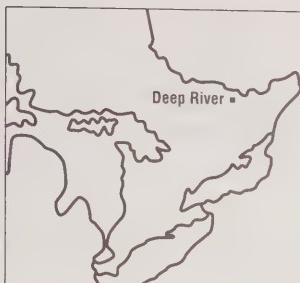
- potential for contamination of the three community watersheds
- long-term structural viability of any management facility
- the influence of compensation which encourages small, vulnerable communities to accept the wastes
- by accepting the historic wastes, pressure would be placed on the community to also accept ongoing and/or high-level wastes.

There was also a lack of trust in the Siting Task Force, its site selection process and the Atomic Energy Control Board. Some members felt the Cooperative Siting Process was limited in its focus and did not adequately address the historical, social and political underpinnings of the Siting Task Force's mandate. Group members also questioned the reasons for moving the wastes from the south to the north.

The outcome

The Community Liaison Group recommended that Atikokan opt out of the Cooperative Siting Process which Council supported by resolution.

Deep River area at-a-glance



Location:	200 km. northwest of Ottawa on Highway 17 along the Ottawa River
Population:	7,000
Area:	154,195 hectares
Employers:	AECL Chalk River Nuclear Laboratories; Petawawa National Forestry Institute; and Canadian Forces Base
Tourism:	Fishing and hunting lodges and white water rafting
Parks:	Algonquin Park and Driftwood Provincial Park
Transportation:	Road and rail
Neighbours:	Township of Petawawa, District of Nipissing, City of Pembroke and Town of Eganville

The community

In the 1940s, during World War Two, Atomic Energy of Canada Limited (AECL) set up laboratories in Chalk River, initially, to collaborate in research on the Manhattan Project. Since then, AECL has diversified significantly, and the labs have been key in the design of three CANDU reactors and the smaller scale Slowpoke reactor. In addition, Chalk River Nuclear Laboratories (CRNL) has developed waste management technologies which it markets internationally.

Forest research is conducted on a parcel of property owned by the Petawawa Canadian Forces Base. For a number of years, the local Councils have been attempting to diversify the economic base.

Four municipalities stated at the outset that they wished to be considered as one for the purpose of the community consultation program. The area (in hectares) and population are divided as follows:

	Population*	Area*
• Deep River	4,166	5,069
• Chalk River	1,000	225
• The United Townships of Rolph, Buchanan, Wylie and McKay	1,758	80,007
• Head, Clara, and Maria Townships	262	68,894

*approximate

The concerns

Throughout the consultation program, the Community Liaison Group used a variety of techniques to obtain feedback on community viewpoints relating to siting a low-level radioactive waste management facility. In February 1990, the group held an open forum to discuss possible impacts and public concerns regarding the proposed facility. The concerns were wide-ranging and included not only those listed below, but, in addition, the community questioned the need to move the wastes from the Port Hope area if, indeed, they could be properly managed there. Further, they felt that the time allotted to the consultation program was insufficient. This sentiment was echoed by residents from potential access-route communities who focused on the risks and local impacts of truck transportation of the wastes. These citizens worried about the perceived stigma which could result in lower property values, fewer tourists and loss of potential community growth. The Community Liaison Group noted that if the community continued in the Process, the access-route communities would require a baseline health study conducted, the waste transported by rail only and impact-related compensation. Concerns included:

- potential for groundwater contamination
- long-term effects on health and safety of the workers and the public

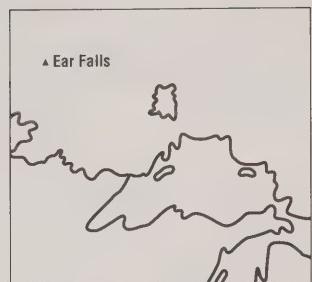
- impact on the economy including tourism, logging and residential property values
- health-related impacts associated with radon and possibly methane gas production
- waste handling and transportation impacts
- environmental effects (leaching) resulting from the burial of these wastes in the area's acidic soil
- effect on wildlife
- whether the compensation package would be offered to other affected communities and whether it would include a local hiring policy
- long-term management of the facility and responsibility and liability issues.

The outcome

The Community Liaison Group recommended to the four Municipal Councils to opt out of the Cooperative Siting Process. The Councils of the Townships of Head, Clara and Maria and the United Townships of Rolph, Buchanan, Wylie and McKay supported the recommendation by resolution.

The Councils of Chalk River and Deep River passed a resolution to proceed into Phase four on the condition that the source communities continue to seriously look at options for managing the wastes within their boundaries. However, if management options are not feasible, the Deep River and Chalk River Councils would consider hosting a facility. Further, they emphasized that risks associated with transportation, as well as costs, would be decisive factors. Because of the small land area, no suitable sites were available in Chalk River; consequently, this community cannot be considered for a waste management facility. However, its continued support in the next phase of the Process is anticipated.

Ear Falls at-a-glance



Location:	200 km. north of Dryden and 100 km. north of the Trans-Canada Highway
Population:	1,313
Area:	35,349 hectares
Employers:	Provincial government; small lumber operations and the tourism industry
Tourism:	Found in the Kenora Tourist District with numerous fly-in camps
Transportation:	Road and air
Neighbours:	Balmertown and Cochenour (Township of Golden)

The community

During the mid-1960s, mining was the major source of employment in the area, employing approximately one-third of the Ear Falls work force. Rapid development occurred with the opening of the Griffith Mine in 1966 and continued until it discontinued operations in the mid-1980s. Since the mine closures, the population has dwindled from a high of 5,000 in the late 1960s to approximately 1,313 at present.

The concerns

Attendance at the Community Liaison Group meetings by local Ear Falls residents tended to be low. However, a small, vocal group comprised of residents from outlying communities attended regularly. From discussions with this group, both during and after meetings, it was apparent that as outfitters and residents of neighbouring communities, their concerns centered on the impact the waste management facility might have on the tourism industry. This group eventually formed an

outspoken and active opposition: Citizens Against Radioactive Dump Sites (CARDS). CARDS circulated a petition in Ear Falls to discourage the community from considering siting a low-level radioactive waste management facility. The Community Liaison Group took the petition into consideration during its deliberations. CARDS' concerns included:

- long-term effects on health and the environment including wildlife
- potential for contamination of water supplies
- need for emergency response plans in the event of a transportation spill
- long-term management of the facility and responsibility and liability issues
- proximity of the site to other municipalities and the subsequent effect
- economic impacts including the cyclical nature of employment for the facility
- impact on tourism.

The outcome

The Community Liaison Group recommended that Ear Falls opt out of the Cooperative Siting Process which Council supported by resolution.

Elliot Lake at-a-glance



Location:	25 km. north of Lake Huron on Highway 108 (midway between Sudbury and Sault St. Marie)
Population:	16,500
Area:	75,679 hectares
Employers:	Uranium mining and milling and the forest industry
Tourism:	Hunting, fishing, and tourist outfitters
Other:	Retirement living programs
Parks:	Mississauga Provincial Park
Transportation:	Road; air; and marine and rail (CP) facilities at Spragge (35 km. south on Lake Huron)
Neighbours:	Webbwood, Massey and Spanish

The community

By early 1991, both the Denison and Rio Algom uranium mines will be reducing employment at their operations and, in addition, Rio Algom will be shutting down the Quirke and Panel mines. This will have a significant impact on the local economy as the mining industry is the primary employer. Council has been attempting to diversify its economy and reduce its dependency on the mining industry and key among its initiatives has been an effort to promote Elliot Lake as a retirement community.

The concerns

There appeared to be an overall consensus among Community Liaison Group members that siting a facility would not present a significant problem in terms of health and safety. There was a dissenting opinion on this, however, as expressed by three members of the Community Liaison Group in their final report. Some residents also expressed concern about the possible negative perceptions that seniors, considering moving into the town, might have about the wastes and the subsequent effect this would have on the success of the town's efforts to promote the retirement living program. Other concerns included:

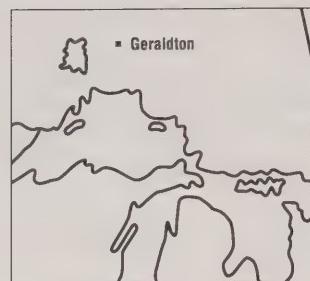
- chemical content of the wastes
- long-term health and safety of residents
- impact on tourism
- the number of jobs that would be created
- the cost of the facility and the compensation available.

Some community members also proposed the possibility of co-managing the Port Hope wastes with the existing tailings.

The outcome

The Community Liaison Group recommended to its Council to continue into the next phase of the Cooperative Siting Process. After considerable discussion, however, Council decided not to proceed into Phase four because of the numerous unanswered questions that could have a significant impact on the future economy of the town.

Geraldton at-a-glance



Location:	28 km. east of Thunder Bay and 5 km. north of Trans-Canada Highway 11
Population:	2,500
Area:	414 hectares (96,000 hectares to be annexed)
Employers:	Ontario Ministry of Natural Resources, Ontario Provincial Police, Department of Correctional Services, Department of Social Services, Federal Department of Northern Development and Mines, Kimberley-Clark and Weldwood of Canada
Tourism:	Canoeing, fishing and tourist outfitters
Parks:	McLeod Provincial Park
Transportation:	Road, rail (CN) and air
Neighbours:	Longlac, Jellicoe, Beardmore and Nakina

The community

Geraldton is recognized as a service center for the northeastern portion of the Thunder Bay district. However, since the last gold mine closed in 1969, Geraldton's population has been steadily declining. Looking to diversify the economy, Council is interested in forms of development that may create employment and bring money to the community. Council feels a waste management facility may sustain the community until something more substantial and long-term can be developed.

The concerns

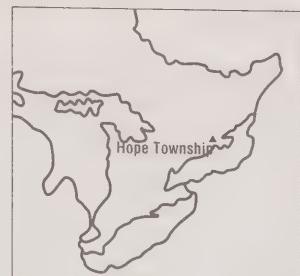
During its consultation program, the Community Liaison Group met with the following concerns relating to a low-level radioactive waste management facility:

- impact on tourism
- arsenic content in the wastes
- mode and safety of transportation
- compensation available to the community
- the safest and most practical technologies for the long-term storage of the wastes
- long-term health and safety of the community
- merits of a baseline health study
- potential for contamination of the surrounding environment.

The outcome

The Geraldton Community Liaison Group recommended that the community continue into Phase four of the Cooperative Siting Process which Council supported by resolution.

Hope Township at-a-glance



Location:	100 km. east of Toronto
Population:	3,636
Area:	26,726 hectares
Employers:	Independent farming and General Motors (Oshawa)
Transportation:	Rail, road, and close to the Port Hope port and the Peterborough, Oshawa and Toronto Pearson International airports
Neighbours:	Port Hope, Newcastle and Cavan and Hamilton Townships

The community

Hope Township is composed of various rural villages with many of the residents working in either Port Hope, Cobourg, Oshawa or Peterborough. The close relationship with Port Hope has been both beneficial and detrimental. Hope Township was the recipient of the wastes that Eldorado Resources Limited produced between 1948 and 1955. The Welcome waste site, toward the south end of the township, was used for process wastes such as carbonate residue, iron residue and ore rejects, as well as for radium contaminated equipment and rubble. During the past decade, remedial action has stabilized the site and surrounding area.

The concerns

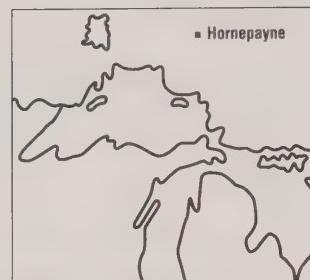
The Hope Township Community Liaison Group was formed late in Phase three of the Cooperative Siting Process. Council requested that the Community Liaison Group only consider removing the wastes from the township. The Community Liaison Group, although not a committee of Council, accepted this view as its primary guideline; however, in the event that no volunteer community is found, it wants to be prepared with knowledge on the remedial action that could be taken to improve the management of the facility. Concern was raised about safe handling of the material, whether it is removed or if in situ management becomes the only option. The need to find a solution for this waste management problem requires that Hope Township continue into Phase four.

Because of its late start, the Community Liaison Group had only a minimum amount of time to be active in public consultation. By the time the Community Liaison Group moves into the next phase, it plans to have an active program in place to inform and obtain feedback from the public.

The outcome

As a source community, the Community Liaison Group recognized the necessity of continuing in the Process; therefore it recommended that Hope Township proceed into the next phase which Council supported by resolution.

Hornepayne at-a-glance



Location:	78 km. south of Highway 11 and 98 km. north of White River on Highway 631
Population:	1,400
Area:	14,102 hectares
Employers:	Canadian National Railway and the local saw mill
Tourism:	Numerous summer activities and fly-in camps
Parks:	Nagagamisis Provincial Park
Transportation:	Road, air and rail

The community

The Canadian National Railway is the major employer in Hornepayne and cutbacks over the last five years have led to a steady decline in population. An interesting characteristic of Hornepayne residents is their general opposition to new development projects. Examples include: the building of their airport, the new hospital, and their tourist and business convention facility, "The Hallmark Centre." However, once a new project has been completed, the community tends to accept it.

The concerns

After 22 weeks of consultation, a group of vocal citizens opposed to the siting of a low-level radioactive waste management facility were actively lobbying to have Hornepaye opt out. A petition was prepared in support of this opposition. Their basic premise is mistrust of the government's commitment to the health and safety of the community. During the information gathering, the chairperson and one other member resigned. Both members were replaced and the group continued in the Process. Those who did support advancing into the next phase felt that such a facility would be economically beneficial to the community.

The remaining issues tended to be similar to those in the other communities including:

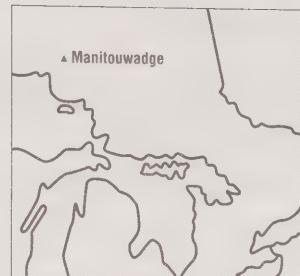
- long-term health and safety of the community
- transportation risks and impacts
- suitability and long-term integrity of the technology
- the site selection process
- potential for contamination of water supplies
- impacts on community image and property values
- cost of siting a facility.

The Community Liaison Group members believed that hosting a low-level radioactive waste management facility would have a negative impact on the community. They felt that the citizens were not ready to accept the risks, perceived or otherwise, given the fact that no specific, tangible benefits were presented to the community.

The outcome

The Community Liaison Group recommended to Council that Hornepaye opt out of the Cooperative Siting Process. However, based on its perception of community support and an economic study conducted by the consulting firm of Coopers & Lybrand, Council decided to continue in the Process. Following Council's decision, a majority of the Community Liaison Group members stated they would support the resolution.

Manitouwadge at-a-glance



Location:	On Highway 614, 50 km. north of Trans-Canada Highway 17 midway between Thunder Bay and Sault Ste. Marie
Population:	5,000
Area:	32,468 hectares
Employers:	Noranda GECO mine, Hemlo Gold mine and the forest industry
Tourism:	Hunting, fishing, sightseeing and a fly-in camp
Transportation:	Road, air and both CN and CP Rail are accessible
Neighbours:	Heron Bay, Marathon and White River

The community

In 1983, the economy of Manitouwadge was stimulated when the Noranda Mines at Hemlo went into full production. There is concern, however, that the Noranda GECO Mine may only be in operation for a few years. Subsequently, this community is interested in diversifying its economy. The feasibility of a low-level radioactive waste management facility was considered for that purpose.

The concerns

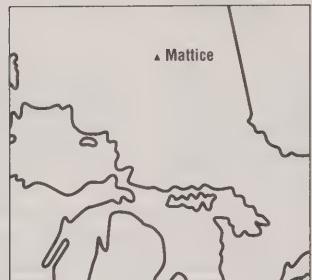
During the consultation program, the Community Liaison Group identified a number of issues and concerns as listed below:

- arsenic content of the wastes
- impact on tourism
- long-term health and safety of the community
- reasons for and transportation risks associated with moving the wastes from the south to the north
- suitability and long-term integrity of the chosen technology
- costs of siting a facility
- compensation available to the community.

The outcome

The Community Liaison Group recommended that Manitouwadge opt out of the Cooperative Siting Process which Council supported by resolution.

Mattice-Val Côté at-a-glance



Location:	50 km. west of Kapuskasing and 40 km. east of Hearst on Highway 11
Population:	953
Area:	3,500 hectares
Employers:	Lumber industry in Hearst and Kapuskasing
Tourism:	Canoe expeditions
Transportation:	Road and air (in Hearst)
Neighbours:	Val Rita, Lowther, Harty and Opasatika

The community

A bedroom community of 953 people, residents of Mattice-Val Côté work in the lumber industry in nearby Hearst and Kapuskasing. The majority of the population is French speaking. Tourism is active during the summer months, with canoe expeditions on the Missinaibi River.

The concerns

During the meetings, residents of Mattice-Val Côté were open to discussing their views with the Community Liaison Group; however, they were generally apathetic towards proceeding into the next phase of the Process. Attendance at most meetings was low, and, in the end, many residents never really believed that a facility would, in all likelihood, be sited in their community.

During their consultation program, the Community Liaison Group members identified a number of significant concerns. Many of these concerns came to light when they were in the process of developing their site elimination criteria. So strong were their concerns that they ended up eliminating all areas within their boundaries and, subsequently, opting out of the Process. Further, residents had little faith in the federal government's financial commitment to the project or in the credibility of the Atomic Energy Control Board. The concerns included:

- long-term health and safety of the community
- potential for contamination of the local river
- transportation risks
- impact on tourism
- the cyclical nature of employment for the facility.

The outcome

On the basis of its site elimination results, the Community Liaison Group recommended that Mattice-Val Côté opt out of the Cooperative Siting Process which Council supported by resolution.

Newcastle at-a-glance



Location:	75 km. east of Toronto along Highway 401
Population:	43,000
Area:	57,985 hectares
Employers:	Ontario Hydro (Darlington), Goodyear Tire, St. Mary's Cement, General Motors and agricultural and other industries
Transportation:	Road; rail; Peterborough, Oshawa and Toronto Pearson International airports; and Oshawa Harbour
Neighbours:	Hope Township, Oshawa and Peterborough

The community

The Town of Newcastle comprises a number of population centres of which Bowmanville, Orono, and Newcastle Village are among the largest. Many residents commute to work in Oshawa and Toronto. Economically, Newcastle thrives on both industry and agriculture; in addition, it hosts the Ontario Hydro Darlington nuclear generating station. The Port Granby waste management facility is located on the north shore of Lake Ontario in the southeastern corner of Newcastle. Between 1955 and 1988, Eldorado Resources Limited (now Cameco) deposited wastes from the Port Hope facility to this waste management site. Within the last decade, Eldorado's attempts to establish a new, more permanent facility to house the wastes located in the Port Granby site were met by heated opposition from local residents.

The concerns

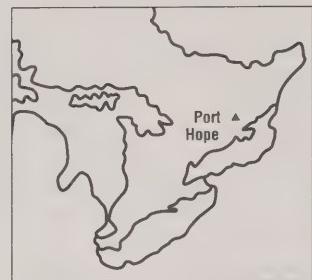
Because of Council's reluctance to participate, Newcastle formed its Community Liaison Group late in the Process. Council reconsidered its initial position and stated, by resolution, that it will be involved only to consider the complete removal of the wastes to a volunteer community. Because the Cooperative Siting Process incorporates the principles of environmental assessment, the Community Liaison Group agreed to evaluate all feasible options for improved management including removal of the wastes from the community, as well as retaining the wastes in an improved condition within its municipal boundaries. Because of its proximity to Lake Ontario, numerous experts and reports have indicated that the Port Granby site, in its present form, would not be suitable for a long-term facility. Therefore, safety issues associated with handling the wastes and various transportation matters were of primary concern to the Community Liaison Group.

To date, there has been no discussion concerning possible compensation should Newcastle volunteer to keep the wastes within its municipality. The community is not amenable to hosting a facility for wastes located outside its boundaries. The Community Liaison Group is presently formulating its plans for a community consultation program.

The outcome

It was too early in its consultation program for Newcastle to report on the possible outcome. However, because it is a source community, the Task Force and Community Liaison Group will work jointly in Phase four to develop action plans for improved management.

Port Hope at-a-glance



Location:	104 km. east of Toronto on Highway 401
Population:	10,243
Area:	1,000 hectares
Employers:	Cameco, Davidson Rubber, Cooper Tools, Zircatec, Esco and Matthews Conveyor, General Motors (in Oshawa) and General Foods (Cobourg)
Transportation:	Road, rail, port and close to the Oshawa and Toronto Pearson International airports
Neighbours:	Hope and Hamilton Townships

The community

Port Hope has lived with low-level radioactive wastes located in its community for a very long time. Its history and that of the development of Canada's nuclear industry have been entwined since the 1930s. It was then that Eldorado Gold Mines opened a radium extraction and refining plant to process high grade pitchblende ore shipped from the Port Radium mine in the Northwest Territories. The Port Radium mine closed in 1939 but was reopened in 1942 to recover uranium, which was sent to Port Hope for processing to be used as part of Canada's involvement in the Manhattan Project. Process wastes containing uranium, radium-226, arsenic and other radioactive and non-radioactive elements were stored at a number of temporary sites within the town.

The concerns

At the outset of their consultation program, one of the primary concerns of the Community Liaison Group members was the impact that their recommendations would actually have. Because the Port Hope waste issue has been studied extensively over the past fifteen years and has still not been definitively resolved, the Community Liaison Group wanted some assurance that its dedication and hard work in preparing recommendations to the Task Force and Council would not be futile. Once the group was confident its recommendations would, indeed, be presented to Cabinet, it embarked on a very intensive consultation program.

Because this situation has existed for so many years, community members have become apathetic and hesitate to involve themselves in any new program associated with the waste issue. The group members were aware of this and knew they would have to go out into the community to get their message across.

In April 1990, presentations were given to 19 different community groups. All presentations were well-received and the response from residents regarding the effort of the Community Liaison Group was very positive. All residents want the waste problem resolved whether it means managing the wastes in a permanent storage site in the town or shipping them to a volunteer community. Many residents commented that Port Hope should take responsibility for their own wastes and not expect any other community to do it for them.

It is important to note that at the beginning of the consultation program, the majority of the Community Liaison Group members were strongly opposed to keeping the wastes in their town. They wanted the wastes shipped out at the earliest time possible. Once they became familiar with the Process and realized this was probably their best and last opportunity to resolve the waste problem, they took on a different perspective. Most significant was the element of control over the Process given to them, for example, they were able to consult with any independent source they wished. As a result, the Community Liaison Group worked very closely with the Canadian Institute for Radiation Safety (CAIRS) and through that relationship and the work produced, developed increasing confidence in the Process and the safety of a properly managed waste facility. As the consultation program continued and communities began opting out of the Process, the group realized it was in its best interest to seriously consider

the management options associated with keeping the wastes in the event that, in the end, no other community would be willing to accept them.

The Community Liaison Group members recognized that they would have to consider all the options for managing the low-level radioactive wastes currently found in both the land-based sites and the harbour. During their meetings, they had preliminary discussions on the options for all the wastes. Further, they recognized that they were not the only group studying the harbour wastes situation. The International Joint Commission on the Great Lakes has identified the Port Hope Harbour as one of forty-two environmentally hazardous sites on the Great Lakes requiring immediate remedial action. The Community Liaison Group believed quite strongly that it should participate, with the Task Force, in developing options for not only the land-based wastes but also those in the harbour.

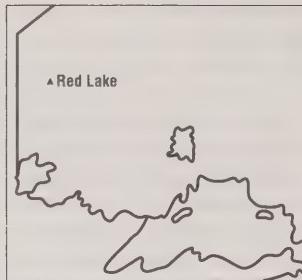
The important issues and concerns associated with a waste management facility that the Community Liaison Group felt should be explored in the next phase are as follows:

- effect on and loss of the Port Hope harbour (which is contaminated with wastes)
- transportation-related health and safety risks
- the technological level of the waste management facility chosen
- long-term health and safety of the community
- negative impact on the community image and property values.

The outcome

The Community Liaison Group advised Council that there was overwhelming community support for proceeding into the next phase of the Cooperative Siting Process to quickly resolve the long standing waste problem in Port Hope. The Community Liaison Group also expressed a strong willingness to work jointly with the Task Force to definitively resolve the problem. Council fully endorsed, by resolution, the Community Liaison Group's recommendation to continue in the Cooperative Siting Process.

Red Lake at-a-glance



Location:	300 km. north of Dryden on Highway 105
Population:	2,288
Area:	11,440 hectares
Employers:	Gold mining and tourism industries, sawmill and provincial government services
Tourism:	Very active with fishing and fly-in camps
Transportation:	Road and air
Neighbours:	Madsen, Cochenour, McKenzie Island and Balmertown (the Township of Golden)

The community

Red Lake is a small mining community with most residents employed by the Campbell and Dickenson Mines—the only two gold-producing mines left in the district. The area has survived the closure of fifteen mines due to expansion in other employable areas such as tourism.

The concerns

During the consultation program, the Community Liaison Group used the slogan 'Get Involved' as its theme. From one-on-one discussions with community residents, members discovered that opinions varied greatly on the potential siting of a low-level radioactive waste management facility. At each meeting, the Community Liaison Group was faced with both hostile

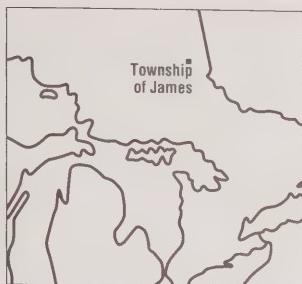
comments from outlying area residents and apathy from its own community. Residents of the neighbouring township regularly appeared at the meetings 'en masse.' With the subsequent formation of the opposition group, All Concerned Citizens Opposing Radioactive Dumping (ACCORD), meeting attendance sharply increased as residents from Red Lake and neighbouring communities gathered to express their concerns. In addition to doubting the government's financial commitment to the project and also the ethics of moving the wastes created in the south to the north, the major concerns were as follows:

- impact on tourism
- long-term effects on health and the environment including wildlife
- potential for contamination of ground and surface water
- transportation impacts including emergency response plans
- the high cost of transporting the waste from the Port Hope area
- the level of compensation to be received
- lack of confidence in the long-term monitoring of the facility.

The outcome

The Community Liaison Group recommended that Red Lake opt out of the Cooperative Siting Process citing strong community opposition to the potential hosting of a facility. Council accepted the recommendation by way of a resolution.

Township of James (Elk Lake) at-a-glance



Location:	66 km. west of New Liskeard along Highway 65
Population:	550
Area:	8,723 hectares
Employers:	Lumber industry (note: Indian land caution)
Tourism:	Fly-in camps and canoeing
Parks:	Lady Evelyn Provincial Park
Transportation:	Road and air (in Earlton)
Neighbours:	Kenabeck Township and Kerns Township

The community

While the Township of James is actively seeking economic development, the Temagami Bear Island Indian Land Caution has placed considerable constraints on its growth. Further, conflict over resource development proposals has continually created tensions between the Elk Lake townspeople and residents from the neighbouring Township of Kenabeck. These tensions were evident throughout the entire community consultation phase of the Process. Citizens Against Radioactive Dump Sites (CARDS) was a group formed by a few residents vehemently opposed to siting a low-level radioactive waste management facility in the community.

The concerns

In addition to a general mistrust of the federal government's commitment to the project, the Community Liaison Group identified four major concerns, as follows:

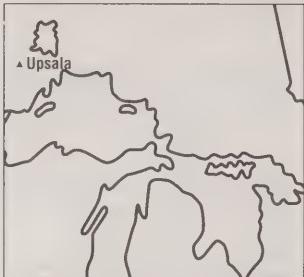
- impact on health and safety of current and future generations
- perception on the community of hosting a facility
- compensation-related issues
- transportation risks.

Further, the Community Liaison Group felt the Process should have addressed compensation-related issues earlier in the consultation phase and in greater detail. The Kenabeck environmental group felt the Cooperative Siting Process was flawed as it did not properly address the concerns of the potentially affected access-route communities.

The outcome

The Community Liaison Group recommended to Council that the Township of James continue into the next phase of the Cooperative Siting Process. The Task Force understands that Council has delayed a decision to continue pending the results of a referendum to be conducted in October 1990 at the township's expense.

Upsala at-a-glance



Location:	150 km. west of Thunder Bay on the Trans-Canada Highway
Municipal:	Unorganized township
Population:	400 (plus 300 cottagers on Lac de Mille Lacs)
Area:	468,000 hectares
Employers:	Forestry and logging industries, CP Rail and the Ministry of Transportation
Tourism:	Seasonal - mostly summer activities
Parks:	Inwood Regional Park
Transportation:	Road and rail

The community

Upsala is an unorganized township; however, the Upsala Regional Development Association has established a jurisdictional area within a 24 mile radius between, but not including, Raith and English River. The population is gathered in two main areas and represents two different interests, one being the town residents; the other, the cottagers on Lac de Mille Lacs, some of whom reside there year-round. The Lac de Mille Lacs Native Bands own land within the area although it is unoccupied at present.

Once a thriving community, Upsala's declining population now comprises mainly retirees and a few residents who own small businesses. When children reach high school age, parents must decide whether to bus them to the closest school which is one hour away in Ignace or move to Thunder Bay.

Those who choose to live in Upsala are independent and enjoy a quiet lifestyle. The entrepreneurs want to build the community with plans to develop peat extraction, promote tourism and attract other industry. Another sector of the population is composed of the 60 people on three farms who run their own school and church and maintain a policy not to interfere with the rest of the community. By far, the largest group are the cottagers, some of whom live in the area year-round and whose contact with the town is mainly for supplies. They regard their investment in terms of the value of their property which is higher than that in the village. Being an "unorganized" township, these groups manage to co-exist with very little contact.

The concerns

The community questioned whether any development is desirable. Some felt that projects that create employment are essential for the community to survive. Others argued that Upsala offers a peaceful lifestyle that would be ruined by a large scale project. Other concerns raised during the consultation program include:

- impact on tourism
- long-term health effects
- negative impact on the community image and property values
- ability to opt out at the end of Phase four, even if no other community has volunteered.

The outcome

Based on the results of a poll conducted at the end of the consultation program, with a ratio of three to one against proceeding into the next phase, the Upsala Community Liaison Group advised the Siting Task Force that it would not continue in the Cooperative Siting Process.

5.8 Outcome of the community consultation programs

Table 7 indicates the outcome of the Community Liaison Groups' (CLG) recommendations and Council resolutions. Not all Councils accepted the recommendations of their Community Liaison Groups.

The Councils' resolutions in the communities numbered one through six reflect their Community Liaison Group's recommendation.

The Community Liaison Group representing the coalition of municipalities recommended that all four municipalities opt out. This recommendation was adopted by formal resolution in the United Townships of Rolph, Buchanan, Wylie and McKay and in the Townships of Head, Clara and Maria. Despite the Community Liaison Group recommendation, the Councils of Deep River and Chalk River passed identical resolutions approving their communities' continuation into Phase four.

The Hornepayne Community Liaison Group originally recommended that the community opt out; however, it was not adopted by Council who resolved, instead, to continue in the Process. Later, Council provided the Siting Task Force with documentation acknowledging support for its decision by the majority of the Hornepayne Community Liaison Group members.

Contrary to the Elliot Lake Community Liaison Group's recommendation that it continue into Phase four, Council opted out.

The Community Liaison Group in the Township of James recommended continuing into Phase four, but, as at August 1, 1990, no resolution had been received from Council.

Geraldton's Council supported, by a resolution, its Community Liaison Group's recommendation to proceed into Phase four.

While there was a broad range of concerns and issues raised by residents in those communities that withdrew from further participation in the Process, several were prevalent, as outlined above:

1. Potential health risks

The most significant concerns identified by many residents were those resulting from the perceived risks related to radioactivity and the associated contaminants such as arsenic in the wastes. Concerns tended to center on the long-term health and safety effects that might occur from the proposed facility. Concern was repeatedly expressed over the potential for ground and surface water supplies to become contaminated. Many communities stated that a baseline health study would be mandatory before they would even consider accepting such a facility.

Table 7
Community response

Community	Potential volunteer communities	
	CLG recommendation to continue	Council resolution to continue
1 Manitouwadge	No	No
2 Ear Falls	No	No
3 Red Lake	No	No
4 Atikokan	No	No
5 Mattice-Val Côté	No	No
6 Upsala	No	No
7 Coalition of four municipalities**	No	Yes*
8 Hornepayne***	No	Yes
9 Elliot Lake	Yes	No
10 Township of James	Yes	No
11 Geraldton	Yes	Yes

* Chalk River & Deep River only

** Deep River, Chalk River, The United Townships of Rolph, Wylie, Buchanan and McKay and the Townships of Head, Clara and Maria.

*** CLG originally recommended against continuing but later supported Council's resolution.

Source communities

All source communities will continue for the remainder of the Process.

2 Potential economic and tourism effects

Many residents were concerned that hosting a low-level radioactive waste facility may adversely affect several sectors of the economy, apart from those specifically related to the facility. Many felt a decline in both community image and property value would result. They feared that a facility would be detrimental to the image of a pristine wilderness and thus tourism, on which many of the communities rely, would suffer. Elliot Lake residents were concerned that their very active program to attract retirees would be adversely affected because of the apprehension many seniors may have regarding radiation.

3 Potential transportation risks and effects

Many residents seriously questioned the rationale behind transporting low-level radioactive wastes such long distances from Southern to Northern Ontario. Their concerns focused primarily on the increased potential for accidents and spills and the need for better emergency response capabilities. Some northern residents expressed resentment over being considered as a dumping ground for wastes from the south.

4 Long-term integrity of the technology

Because of the long-lived radioactive nature of the wastes, many communities feared that the long-term integrity of the facility could not be maintained unless provisions were in place for monitoring and perpetual maintenance. They questioned any institution's ability to fulfill a promise of maintaining a facility in perpetuity.

While these four issues arose continuously in most community discussions, a few others were also significant. First, there was a general mistrust, especially from many of the northern communities, of the federal government's commitment to provide the funds required to implement this project. Second, as reported in *Opting for co-operation*, there was also a continuing mistrust of the Atomic Energy Control Board. Many of the communities felt this agency does not adequately ensure the health and safety protection of the public and workers.

Finally, many people thought that if they accepted these low-level radioactive wastes, other wastes, possibly high-level, would be brought to the community. Some feared the likelihood of this situation while others saw it as an opportunity for economic development of their community.

5.9 Observations

As discussed previously, many communities believed a baseline health study was essential. Potential host communities learned that the most serious health risk associated with low-level radioactive waste is one, albeit a very small one, of cancer induction. It is understandable that there would be requests for both baseline health studies to determine the existing cancer rates in the community and for follow-up studies to demonstrate whether cancer rates change once a low-level radioactive waste management facility has been established.

Superficially it would appear entirely reasonable to request such studies. Realistically, however, it is unlikely that such health studies would yield useful conclusions for the following reasons:

- cancer is such a common disease (the cause of approximately one in four of all adult deaths)
- there is a long latent period between radiation exposure and the clinical manifestation of an induced cancer
- the potential host communities have relatively small populations
- the pre-existing cancer rates vary from place to place
- populations are very mobile.

Certainly the studies would not be able to measure the extent of harm caused by a low-level radioactive waste facility to the satisfaction of the community, even if the risks were many times those estimated and if barriers were significantly less effective than design specifications.

Understanding the limitations of baseline and follow-up health studies requires a sophisticated knowledge of epidemiology and statistics beyond that of the average educated person. A reluctance or refusal by an authority to carry out studies may be soundly based, but is likely to be regarded as motivated by a callous lack of concern or an attempt to conceal undesirable results. Nevertheless it is difficult to justify a study which, while satisfying a community demand, is doomed to being inconclusive even before it begins. To avoid this dilemma, the Task Force recommended the approach advocated by Dr. Judith Leach in her article entitled,

"Cancer cluster investigation: toward a more rational approach" and found effective in the state of Wisconsin.²

The Task Force was most fortunate as Phase three concluded to have communities willing to continue in the Cooperative Siting Process. In light of the past history of attempting to site radioactive waste management facilities, it was even more remarkable that a source community would be willing to discuss the possibility of managing its wastes within its own boundaries.

This present attitude in the potential volunteer and source communities is very new and needs to be handled sensitively if it is to develop into informed acceptance adequately broad-based to prevail at a community-wide referendum. To sustain this level of thinking in the period between Phases three and four requires that the Secretariat be provided with adequate resources. The resources are necessary to allow them to obtain the expertise of unbiased scientific and technical professionals.

To date, the Task Force's experience shows that there remains a mistrust of government, associated government agencies and in the information they provide. However, the Task Force believes that if these groups understand and fully support the Process principles and safeguards, then their continuing participation would be most beneficial. At the same time, the further involvement of independent, non-government organizations, such as CAIRS is crucial as they served to foster trust in the Cooperative Siting Process.

The concerns and interests of the communities who are continuing in the Cooperative Siting Process are discussed in the next chapter.

² Dr. Judith Leach, "Cancer cluster investigation: toward a more rational approach," *Canadian Medical Association Journal*, 141 (1989), 105-106.

Chapter six

Conclusions and recommendations

6.1 Communities interested in moving forward

In this chapter, interested communities are divided into two categories: potential volunteer and source. Their locations are shown in Figure 3.

1 Potential volunteer communities

Deep River

During the community consultation program, residents in Deep River raised two prevailing concerns. One was that the possibility of managing the historic wastes in the Port Hope area be given full consideration before any decision to move them to another community is taken. The other related to the perceived negative effect that transporting the low-level radioactive wastes through the surrounding communities might have if an accident or spill occurred.

While the Community Liaison Group, representing four municipalities, recommended against continuing in the Process, the Deep River Council decided to proceed subject to the following requests:

- i) So long as any municipality within which any such wastes are currently stored remains a potentially viable site under the Process, the risk and cost associated with transportation should be a decisive factor in designating such a municipality as a permanent site in preference to Deep River.
- ii) Any relocation of such wastes to Deep River shall be by rail in containers suitable for the purpose.
- iii) During or at the end of Phase four a referendum on the municipality's further participation in the site selection process shall be conducted by the Clerk of the Town of Deep River, with the costs of such referendum to be paid by the federal government.

Chalk River

Chalk River, located next to Deep River, was one of four municipalities which formed a coalition for the purpose of the consultation program. Collectively, the municipalities were represented by one Community Liaison Group.

While Chalk River supported the Deep River Council by passing an identical resolution to proceed into Phase four, suitable sites were not identified within its municipal boundaries. It is expected that in the next phase, Chalk River will be involved in the Process as an interested neighbour to ensure that its concerns are met with respect to health and safety and transportation of the wastes.

Geraldton

Geraldton has been attempting to diversify its economy. A low-level radioactive waste management facility is viewed as a possible opportunity to achieve that objective.

During the consultation program, residents put forward to the Community Liaison Group the following concerns:

- impact on tourism
- contamination of the surrounding environment
- impact on the health of the community and the merit of a baseline health study
- arsenic content in the wastes
- safety issues related to waste transportation
- suitable long-term management technologies
- amount of equity compensation to be given to the community for accepting the wastes.

Figure 3

Volunteer/source communities



The Community Liaison Group recommended to its Council that Geraldton continue into Phase four which Council unanimously endorsed by passing a resolution. Geraldton is requesting equity compensation in the amount of 10 percent of the waste management facility costs.

Horne Payne

Some local citizens in Horne Payne, including the original Community Liaison Group chairperson who eventually resigned from the position, are strongly opposed to the siting of a low-level radioactive waste management facility in their community. Their main concern focused on the risks associated with the wastes. Those who support advancing into the next phase believe the wastes could be safely contained and that such a facility would be economically beneficial to the community.

Amid this controversy, the Horne Payne Community Liaison Group recommended to Council not to continue into Phase four. However, based on its perception of community support and an economic study conducted by the consulting firm of Coopers and Lybrand, Council decided to continue in the Process. Subsequently, a majority of the Community Liaison Group members stated they would support Council's resolution. Council indicated this in writing to the Siting Task Force.

Township of James (Elk Lake)

Conflict over resource development proposals has continually created tensions between the Elk Lake and Township of Kenabeck residents. These tensions were evident throughout the entire community consultation phase of the Process. Residents in the neighbouring communities expressed considerable concern over the possibility of a low-level facility being developed in the area.

While the Community Liaison Group identified positive economic benefit from developing a facility, it was concerned that the project would cause a serious rift in the community.

As a result of initial site elimination activity, the Community Liaison Group determined that only a portion of one possible site exists outside the boundaries of the Temagami Bear Island Indian Land Caution. A preliminary evaluation shows that the geology of this site appears unsuitable for any of the proposed low-level radioactive waste management technologies.

Nevertheless, the Community Liaison Group recommended to its Council to continue into the next phase of the Process. The Task Force understands that Council has delayed a decision to continue in the Process pending the results of a referendum (conducted at the Township's expense) scheduled to take place in October 1990.

The Task Force proposes that if Council passes, before the end of 1990, a resolution to continue into the next phase, and if the outcome of the town referendum clearly supports continuation, and if the Indian land caution in the area of the potentially suitable site is lifted before the beginning of Phase four, then this community should be considered eligible to proceed in the Process.

2 Source communities

The action plans to be developed in the source communities should include details on the character of the wastes, improved management solutions and remedial measures for the wastes located within their municipal boundaries. The Port Hope Community Liaison Group members progressed sufficiently with their consultation program to enable them to report to the Task Force that they are anxious to continue in the Process and find a solution to this problem. The Hope Township group prepared an interim report setting out its proposed consultation plans and terms for continuing. Newcastle has just begun its program. Neither of the last two groups had sufficient time to undertake a complete community consultation program.

Port Hope

The Community Liaison Group's recommendations were endorsed unanimously by its Council in a resolution which supported continuing into Phase four. The Community Liaison Group made the following three recommendations:

- i) The Community Liaison Group recommends that Port Hope proceed to the next phase in the Cooperative Siting Process to find a permanent site for Port Hope's low-level radioactive wastes.
- ii) The people of Port Hope wish to retain control of the cleanup program in their community, therefore they recommend the following:
 - a) that the Port Hope Community Liaison Group be continued for the entire life of the Cooperative Siting Process
 - b) that the Port Hope Community Liaison Group, jointly with the Siting Task Force, be empowered to hire advisors of the Community Liaison Group's own choosing and to commission whatever studies may be required during the next phase of the Siting Process, and that adequate funding be provided for this purpose
 - c) that the criteria for selecting a site, for the cleanup of wastes in the town and for deciding which wastes are to be moved be developed by the Port Hope Community Liaison Group jointly with the Siting Task Force.

iii) The International Joint Commission on the Great Lakes has identified Port Hope Harbour as one of 42 environmentally hazardous sites on the Great Lakes requiring immediate remedial action. The Community Liaison Group recommends the following:

- a) that Port Hope Harbour be included under the criteria to be developed by the Port Hope Community Liaison Group jointly with the Siting Task Force
- b) that the Government of Canada consider development of a new harbour in Port Hope as a demonstration of Canada's commitment to the environmental integrity of the Great Lakes.

Hope Township

Although the Community Liaison Group will not begin a full community consultation program until September 1990, it submitted an interim report of its findings, to date, to its Township Council and the Task Force. The Community Liaison Group made the following three recommendations:

- i) Since it is important for the community to retain control of the manner in which the wastes are excavated and transported, therefore the people of the Township of Hope should retain control over the environmental and safety aspects of the remedial program to cleanup the radioactive and arsenic wastes that are presently located at the Welcome low-level radioactive waste site.
- ii) Since the Township of Hope is a source community, and since it is important that its residents evaluate the issues and consequences related to the remedial program, therefore the Township of Hope should continue to be involved with the next phases of the Cooperative Siting Process designed to find a permanent site for the wastes currently located at the Welcome low-level radioactive waste site.
- iii) Since the Community Liaison Group for the Township of Hope has been formed for the purpose of assisting the residents to evaluate and understand the cleanup of the wastes, therefore the Community Liaison Group for the Township of Hope should continue its operations, with adequate funding, for the duration of the Cooperative Siting Process, and in consultation with the Siting Task Force, the Community Liaison Group of the Township of Hope

should be empowered to hire advisors of its own choosing, and to commission whatever studies may be required during the remaining phases of the Cooperative Siting Process.

As in the case of Port Hope, Council unanimously supported the Community Liaison Group's three recommendations by passing a resolution.

Newcastle

To date, the Newcastle Community Liaison Group is still in the preliminary stages of its consultation program. A progress report in the form of minutes of meetings was submitted to the Task Force prior to the end of Phase three. The Mayor and Council members continue to reinforce their long-standing position that the Port Granby wastes be moved to a facility outside their community.

Scarborough

As discussed previously, a Community Liaison Group was not formed in Scarborough since the disposal of the small volume of low-level radioactive waste in that community was already the subject of an agreement between the federal and provincial governments.

6.2 Communities recommended to proceed to Phase four

The Councils of Deep River, Chalk River, Geraldton and Hornepayne passed resolutions to proceed into Phase four. The Siting Task Force believes that because of its land restrictions, Chalk River will not be able to participate as a voluntary community. However, Chalk River's support was noted and it will continue in the Process as a potentially affected community.

Like all of the communities that participated in the intensive community consultation program, these four communities spent considerable time and effort in reaching their decisions. Their willingness to commit further to the Cooperative Siting Process is greatly appreciated.

The Task Force believes that, particularly in the case of the three potential volunteer communities, the decision as to who moves forward in the Process should not be based solely on transportation cost. Distance did not preclude community involvement in Phase three and; therefore, it should not be the deciding factor affecting community participation in Phase four.

The prime objective of Phases one to three was to have communities come forward who were willing to explore the possibility of becoming part of the solution to the waste management problem. In the next phases, this willingness should be based on a more comprehensive community-wide understanding of the characteristics of the wastes, the technologies for proper management, the potential health and environmental effects and the costs and benefits to the community. Further, the community should have good potential for finding a suitable site, be free of land-use encumbrances and be able to protect valued ecosystems and social amenities. Cost, an important consideration, is addressed in section 6.3.

Taking all these considerations into account, the Siting Task Force recommends that the three potential volunteer communities — Deep River, Geraldton and Hornepayne — be considered as viable candidates for Phase four.

While it is understood that the source communities of Port Hope, Hope Township and Newcastle will continue into Phase four, the Task Force is pleased to report that Port Hope and Hope Township passed unanimous resolutions stating their willingness to continue participating in the Cooperative Siting Process.

6.3 Cost considerations

As part of its mandate, the Siting Task Force was requested to provide detailed cost estimates, which can be divided into three categories: the costs associated with Phases four and five; costs for the disposal options including transportation; and costs for impact management including compensation.

1 Costs for Phases four and five

Opting for co-operation suggests that the schedule to complete Phase four be from 18 to 24 months and for Phase five be from 6 to 9 months. Based on experience with implementing the first phases, the Task Force estimates that a budget to cover a 36 to 40 month time frame should be established to allow some flexibility in completing Phases four and five. This would include preliminary and detailed investigations and other required studies of a general and detailed nature associated with determining the feasibility of siting a low-level radioactive waste management facility and developing source community action plans. Source communities need to develop action plans early in Phase four so that potential volunteer communities will have a clear understanding of the characteristics and volume of wastes to be moved. The action plan results will form the basis for determining the size and cost of a facility.

The Task Force estimates that site investigations and other related studies of the six communities could cost a total of \$15 million with most of the expenditures expected to occur during Phase four. As a cautionary note, all costs presented in this chapter are based on very preliminary estimates and should be reviewed in that context.

To support the activities of the Secretariat and next Task Force, it is estimated that an administrative budget of \$6 million is required for the 36 to 40 month period and that the total cost to implement Phases four and five is \$21 million. Because of the staged nature of the Process, communities could opt out before completion of the detailed site investigations. If this occurs, there may be a commensurate reduction in the budget requirements.

Preliminary/detailed site investigations and related studies (@ \$2.5 million per community)	\$15 million
Administrative costs	\$ 6 million
Total	\$21 million

2 Estimated disposal costs including transportation

At this stage in the Process, the Siting Task Force believes there is insufficient detailed information to choose a preferred disposal option. The Community Liaison Groups' preliminary observations suggest that above-ground and mined cavern facilities are the preferred technologies for the potential volunteer communities, but this preference could change once the results of detailed investigations are known.

The outcome of the action plans in the three source communities will indicate the types of technologies that would be available should they determine that keeping the wastes in their communities is acceptable. Because the action plans have not yet been developed, the Task Force has no basis upon which to estimate the cost of a preferred technology. Port Hope is the only source community that has progressed to a point where it could consider technological options. Preliminary discussions have taken place in Port Hope on the possibility of managing the harbour wastes *in situ* and the land wastes in an above-ground mound at Rollins Ravine. The Task Force recognizes that detailed assessments of these options are required in Phase four before any decision can be made by the community. Port Hope is considering the possibility of keeping *only* the wastes presently located in its community.

The costs associated with the relocation of the approximate 1.3 million metric tonnes of the wastes fall into three categories: (1) excavation of the wastes and restoration of the sites in the source communities, (2) transportation of the wastes by a combination of road and rail to the potential volunteer community, and (3) facility costs.

Total cost for excavating the wastes and restoring the sites in the source communities is estimated at \$35 million. Of this, approximately \$17 million is required for excavation and site restoration in Port Hope.

Transportation of the total quantity of wastes by a road and rail combination from the source communities to the following destinations on the basis of \$ per metric tonne is estimated at:

Deep River	\$37
Hornepayne	\$68
Geraldton	\$70

It should be noted that transportation requirements would form a significant component of the total cost.

In addition, there is expected to be some expenditure in improving infrastructure associated with the transportation. These costs would include a handling and temporary holding facility for the wastes in transit. This is estimated to be between \$2 million and \$3 million.

The estimates for the facility costs are as follows:

- a) An above-ground mound
 - for all wastes \$90 million
 - for Port Hope wastes only \$30 million
(excluding the Harbour)
- b) In situ management of Port Hope Harbour wastes* \$8 million
- c) Caverns (for all wastes) \$185 million to \$205 million

* In situ management of the harbour wastes will prohibit the present use of the turning basin as a small craft harbour. Relocation of this community valued facility is estimated at \$5 million dollars.

3 Costs for impact-related and equity-related compensation

One of the principles of the Cooperative Siting Process states that communities should receive compensation for unavoidable residual impacts. This could be in the form of both impact-related compensation which aims to offset unavoidable adverse impacts and equity-related compensation which ensures that by taking responsibility for a facility, the community will be compensated in a way that will leave it better off than it was before.

In the Process, social and political concerns are addressed candidly and form the basis for joint decision-making. The community chooses to be considered as a candidate site before detailed studies are initiated and

specific siting options and impact management proposals are developed. The impacts and risks associated with improved low-level radioactive waste management will be identified specifically during detailed technical site investigations to be conducted in Phase four. It will then be possible to specify the costs of impact management requirements and, consequently, related compensation costs. Based on experience elsewhere, these could range from 0.5 percent to 3 percent of project development costs. The Task Force estimates that the federal government should, at the very least, allocate 3 percent of the project development costs for impact management (excluding equity compensation).

The Task Force believes it is imprudent to estimate the amount of equity-related compensation until the potential impacts and risks have been determined, which should be in Phase four. Once they are known, the specifics of the compensation package can be developed jointly between the communities and the federal government.

6.4 Development of an agreement for impact management and equity compensation

A key component of the Cooperative Siting Process is the development of an impact management agreement that will specify the measures to be undertaken to:

- protect human health and the environment
- prevent or reduce potentially adverse effects from facility construction and operation
- compensate for any unavoidable negative effects
- enhance local benefits.

Such an agreement will be developed in Phases four and five of the Siting Process, as described below, and as illustrated in Figure 4.

During Phase four, detailed technical, economic, environmental and social studies will be undertaken in each potential volunteer and source community to assess the merits of alternative technologies for improved management of the low-level radioactive wastes. The terms

of reference for these studies will be prepared by the Community Liaison Group, the next Task Force and technical advisors, in consultation with local residents and any adjacent communities who may be affected.

As information on the potential technical, economic, environmental and social effects of proposed options becomes available, it will be possible to begin identifying impact management measures to handle potential problems and enhance possible benefits. The Community Liaison Group will play an important role in this problem-solving process by consulting with local residents and others who may be affected. The group will gather information regarding the significance of potential negative and positive effects, the kinds of impact management measures considered necessary, their relative importance and the preferred local benefits.

This information will be documented in a jointly prepared draft assessment report and circulated for review and discussion to residents, the local Council, provincial and federal government departments, agencies and regulators, as well as independent experts and other interested groups. On the basis of the comments received, further analyses may be required and the proposed impact management strategy and local benefit options refined. Again, the Community Liaison Group will play a key role by ensuring that the impact management strategy and local benefit options developed respond to residents' concerns and reflect community values and priorities. During the assessment and review process, the federal government must indicate its commitment to implement the proposed impact management measures and the amount of funds it is willing to provide for a local benefits package. A final assessment report will be prepared which will document:

- the findings of all the studies undertaken
- the comments received in the public review process
- the impact management measures considered necessary
- the community's preference for a local benefits package
- the federal government's commitment to these benefits.

On the basis of this information, local residents will be asked, in a referendum, to authorize their Council to proceed into Phase five of the Process to finalize a formal project implementation and impact management agreement with the federal government. It should be emphasized that Principle five of the Cooperative Siting Process must be strictly applied. Therefore, no referendum should be held if, during the course of the assessment studies, it is determined for any community, that the safety of the environment and human health cannot be effectively safeguarded.

In Phase four, certain assurances must be given to residents to enable them to make informed decisions in the referendum. Residents will want to be assured that:

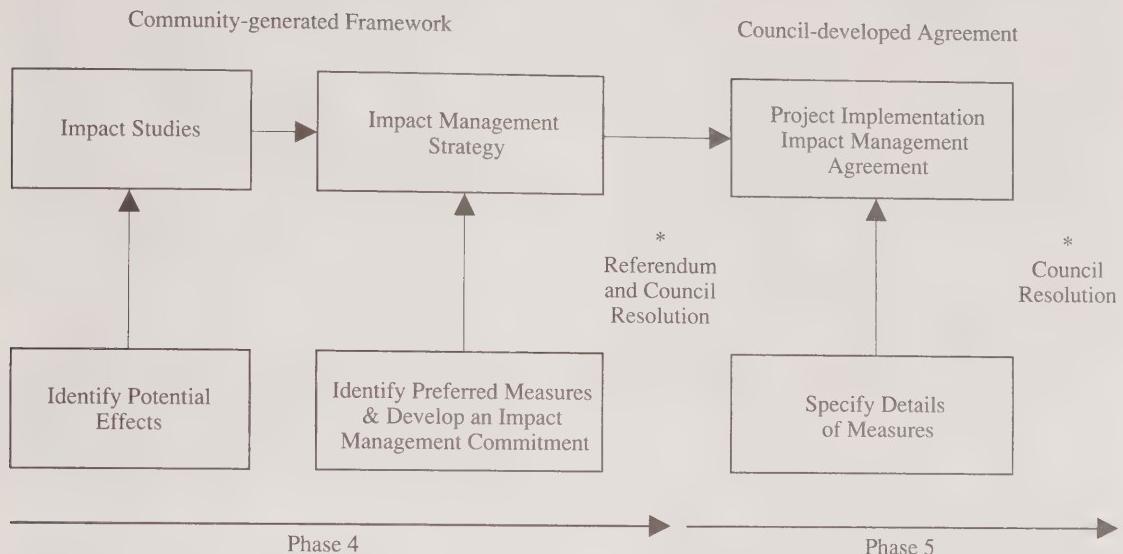
- (a) the assessment studies are not only independent and thorough but also address their specific concerns,
- (b) the federal government is committed to implementing the impact management measures considered necessary and preferred, and
- (c) the community will, in fact, be left better off if it volunteers to accept a low-level radioactive waste management facility.

To provide these assurances, the following requirements must be met:

- the study process must be based on joint fact-finding and extensive community consultation in adherence with Principles two and four and Safeguard three of the Cooperative Siting Process. These studies should not be done "for" but rather "with" the community. The new Task Force will be responsible for ensuring that these principles and safeguards are upheld.
- to assure the community that it is committed to the Cooperative Siting Process, the federal government must be involved in the problem-solving steps in Phase four. Further, government involvement is necessary for problem-solving to truly be a joint process and to ensure that the rationale behind the decisions made and the merits of the mitigation and compensation measures are thoroughly understood.

Figure 4

Development of an agreement



- prior to the referendum, the federal government must make explicit the funds available for equity compensation. Since the need for equity compensation is the same for all communities, the local benefits budget should be the same.
- in Phase five, the results of Phase four will be translated into formal legally-binding agreements. Council and the federal government will document specific details of any technology for improved management of the wastes, including perpetual maintenance.

6.5 Recommendations to complete the Cooperative Siting Process

The Cooperative Siting Process principles and safeguards are highly regarded by many and were strictly applied by the Siting Task Force. Since it was necessary to be adaptable to the requirements of each community, the Task Force allowed some flexibility in the timing of and approach to specific activities. In putting forward its recommendations, the Task Force recognizes that this same need will undoubtedly be present in Phase four. Following is a brief description of the activities that will occur in the balance of the Cooperative Siting Process.

Phase four

Phase four, Project Assessment, is divided into two stages. Stage one requires that the community agree on the most appropriate site and technology. If no site is available, the potential volunteer community will have to opt out of the Process. Studies of interest to participating communities, as well as those required in the assessment phase, will be conducted. Stage one ends with a commitment from Council to proceed to more detailed investigations.

The most intensive work will be conducted in stage two of the Process. Detailed environmental assessment and site/technology characterization will be implemented. In addition, impact management measures will be determined, as well as the specifics of a mutually agreeable equity compensation package. This will be followed by a binding referendum taken to measure community acceptance and a Council resolution accepting or rejecting the proposed waste management solution.

Phase five

Phase five will involve such matters as detailed engineering and site design requirements, and transforming the outcome of Phase four into legal agreements acceptable to both the community and the federal government. A Board of Directors will be established to oversee the design, construction and operation of the low-level radioactive waste management facility.

Siting Task Force recommendations

Recommendation 1:

The Siting Task Force recommends proceeding into Phase four and immediately appointing a new Task Force.

A delay at this time could jeopardize the consultation program and source community action plans. Similarly, the potential volunteer communities could interpret a delay as a lack of government commitment to the Cooperative Siting Process.

Recommendation 2:

The Siting Task Force recommends that source community action plans continue to be developed and the Community Liaison Groups and Secretariat continue to function after the Task Force has disbanded in August 1990.

Source communities will be involved in the Process until the waste management problem is resolved and it is essential that plans for improved management of the wastes in these areas be developed based on the Process. The Siting Task Force understands that the first preference of Port Hope, Hope Township and Newcastle is to have the material removed to a facility outside of their communities. Nevertheless, the Process supports the Environmental Assessment Review Process condition which requires that a full range of options be examined to find the most socially responsible and environmentally acceptable course of action.

The Task Force recommends that while Cabinet is considering this report, the Secretariat continue to provide support to these Community Liaison Groups.

Source communities need to develop action plans early in Phase four so that potential volunteer communities will have a clear understanding of the characteristics and volume of wastes to be moved. The results of the action plans will form the basis for determining the size and cost of a facility.

Recommendation 3:

The Siting Task Force recommends that the federal government demonstrate its commitment to resolve the historic low-level radioactive waste management problem by providing adequate resources and a time frame of 36 to 40 months to complete the Process.

The participating communities expressed a great deal of concern that the government's commitment to complete the Process and to provide the necessary time and resources is deficient.

In demonstrating government commitment to definitively resolve the waste management problem, it is crucial that adequate resources be provided to complete the Process. When the Secretariat was initially set up to administer the first phases of the Process, it was not provided with sufficient resources. Phases four and five are critical steps in the Process and will require additional senior personnel. Further, budgets should be sufficient for the Secretariat to retain full-time facilitators in each participating community. The size of the Community Liaison Groups may also have to be increased to accommodate the additional workload and broader range of community interests.

Recommendation 4:

The Siting Task Force recommends that the specifics of impact management measures and equity compensation be developed and stated in the assessment document and be mutually agreeable to the community and the federal government before a referendum is held.

The Process principles and safeguards provide the means for decisions to be made by the community based on full information. After being assured that the wastes in question could be managed safely and that human health and the environment will not be compromised, residents will want to know the extent of the benefits they will receive if they agree to accept a low-level radioactive waste management facility in their community.

After detailed assessment, the specifics of the impact management measures and equity compensation will be stated in the environmental assessment document and be made known to the community prior to a referendum at the end of Phase four.

The results of Phase four will be translated into formal agreements in Phase five. Council and the federal government will document specific details for design, construction and operation of any technology for improved management of the wastes, including perpetual maintenance.

Recommendation 5:

The Siting Task Force recommends that the Secretary-General of the Secretariat be given the mandate to represent the federal government in the process of developing the impact management measures and equity compensation. The results should be mutually agreeable to the community and the federal government prior to a referendum.

The communities will want to be assured not only that the assessment studies conducted during Phase four are thorough but that any proposed measures for impact management and the specifics of equity compensation put forward will be understood and committed to by the federal government. For this reason, it is essential that the federal government be involved in the problem-solving steps in Phase four. In this way, the development of both the impact management measures and the specifics of equity compensation will truly be a joint planning and decision-making process. Further,

the rationale underlying the decisions made and the merits of the forms of compensation will be understood by all those involved. It is the opinion of the Siting Task Force that the Secretary-General of the Secretariat is in the best position to represent the federal government in the Process.

Recommendation 6:

The Siting Task Force recommends that specific funding be earmarked for a low-level radioactive waste management facility, associated impact management and equity compensation.

The federal government should earmark sufficient funds for the design, construction and long-term operation of a low-level radioactive waste management facility. Similarly, funds should be set aside for impact-related compensation which could be as high as three percent of the project development costs. In addition, communities interested in hosting a facility will want to know what they will receive in the way of equity compensation. The Siting Task Force resisted offering equity compensation at the front-end of the Process to avoid accusations of bribery. The Siting Task Force advises that an upper limit of equity compensation should be made known to seriously interested communities in Phase four. This will be determined after detailed investigations and in time to develop a mutually agreeable package detailing the specifics of the impact management measures and equity compensation. Further, to demonstrate commitment to equity compensation, the government should include a statement-of-intent in the mandate of the next Task Force.

Recommendation 7:

The Siting Task Force recommends that involvement of neighbouring communities should be enhanced during the balance of the Process and that consultation guidelines should be developed to ensure their active participation and that of others.

In the first phases of the Process, a number of communities had difficulties with neighbouring groups and individuals. The Siting Task Force believes that the involvement of neighbouring communities in the balance of the Process should be enhanced to ensure that they have an opportunity to express their views and concerns.

Phase four should begin with a review of the existing guidelines. In addition, the development of new consultation guidelines is required to advise the Community Liaison Groups on the most appropriate consultation techniques including how to inform and involve the community, neighbouring communities, the media and special interest groups. These guidelines should also describe the role of the key stakeholders with special attention given to the development of procedures for the involvement of access-route communities.

Recommendation 8:

The Siting Task Force recommends that studies required for the detailed assessment be commissioned early in Phase four with the terms of reference developed jointly by the new Task Force and the Community Liaison Groups.

The Siting Task Force emphasizes that studies should be carried out beginning early in Phase four to address the issues and concerns raised in the consultation phases, as outlined below:

- effects on tourism
- effects on property values
- spin-off benefits to local community
- need for baseline health studies
- transportation impacts.

Recommendation 9:

The Siting Task Force recommends that a binding referendum take place at the end of Phase four.

After full information based on detailed investigations and measures for impact management and specifics of equity compensation are known, a community-wide binding referendum must take place. *Opting for co-operation* suggests that a poll be used to measure community acceptance; however, the participating communities advised the Siting Task Force that a referendum would be more appropriate.

Chapter seven

Lessons learned

7.1 Observations

Implementing the first phases of this innovative siting process was a most interesting and challenging experience. In terms of the level of community participation, the Cooperative Siting Process was more successful than anyone anticipated. In many ways, the Task Force broke new ground and in doing so, both it and the Community Liaison Groups encountered some unexpected challenges. The challenges were faced, the difficulties resolved and along the way important lessons were learned.

This final chapter presents a commentary on the matters underlying the lessons learned, and in effect, highlights the strengths and weaknesses of the Cooperative Siting Process. The Task Force recognizes that it is difficult to judge a five-phase process at the end of the third phase, as the ultimate test is still ahead. However, these early observations may prove useful in implementing the balance of the Process, as well as for those who may wish to apply this Process to other siting exercises.

The principles and safeguards were strongly upheld by those involved in implementing the Cooperative Siting Process. At this time, the Task Force has nothing to offer by way of fundamental improvements.

The original time projections in *Opting for co-operation* should be considered for any future endeavours, as the compressed time frame allotted for Phase three, together with an overwhelming community response, taxed available resources.

Following are comments on the strengths, weaknesses and suggested improvements to activities that merit the consideration of the new Task Force before implementing the balance of the Process. The comments relate more to details on how the Process was implemented, the support provided to communities, time factors, techniques used to gauge community sentiment and other matters, such as the lack of a proponent which may have influenced the outcome. The comments are divided into two group: those relating to activities of the Task Force and the Secretariat, and those involving the communities.

7.2 Siting Task Force activities

1 Publicly designed process

The manner of participation in developing the principles and safeguards of the Cooperative Siting Process reinforced its cooperative nature. Conflicts that arise in facility siting situations are associated as often with the procedures as with the substantive issues. If communities find their rights to fair treatment are being denied, they are not likely to consider a facility siting proposal, regardless of the benefits. In recognizing this, the Cooperative Siting Process was designed through an approach of public consultation so it would reflect what was viewed as fair. The Task Force continued this consultative approach in implementing the first three phases. It actively sought the input of local Councils and other individuals in developing procedures for setting up the Community Liaison Groups and for implementing site elimination criteria. As a result, authorship of some of the Process "rules" was jointly shared, a factor which enhanced their perceived legitimacy.

At the same time, by initially focusing its attention on Council, the Task Force encountered many community groups and individuals with limited understanding of the Process. Based on their preconceived notions of the wastes and potential health effects, their assumptions of the Process and mistrust of government, many of these residents opposed any action by Council. In communities where this occurred, it may have been useful if more information had been provided to residents before Community Liaison Groups were formed. With proper community profiling and by working with Council, the Task Force could have organized an initial information program for community leaders and group representatives to enable them to foster an understanding of the Process and related issues. This may have allowed an opening for more discussion before opposing positions became entrenched. However, it is acknowledged that a portion of any community will be opposed to a siting process involving low-level radioactive wastes, regardless of how much the public is involved in the process design and implementation.

2 Clear objectives and procedures

Clear objectives and procedures were essential. Although *Opting for co-operation* set out a fairly explicit framework for the Process, the level of direction that it offered was insufficient to guide the day-to-day administration. Rather than adopting an ad hoc approach to implementation, the Task Force spent considerable time and effort, at the beginning of each step, clarifying objectives and specifying procedures. This exercise was valuable as it enabled the Task Force to be consistent in its proceedings with the different Community Liaison Groups and it also provided group members with necessary direction in an unfamiliar process.

3 Community support

While the partnership between the Task Force and the communities was based on a clearly defined principle, the Community Liaison Groups could have been better supported.

The Cooperative Siting Process required communities to assume a level of commitment and responsibility new to facility siting processes. In this respect, the brunt of the responsibility fell on the Community Liaison Group. The nominations procedure which the Task Force used to select residents to serve on the Community Liaison Groups proved effective. However, once the groups were established, the Task Force did not provide them with adequate guidance. For instance, at the outset, time was required for the groups to understand the Process and the issues to be addressed. This should have been followed by a much clearer picture of their responsibilities and methods of public consultation. Because this support was insufficient, some groups members were confused about their mandate. Some members chose to use the Community Liaison Group as a platform to advocate their own positions rather than as a forum for community information and consultation. Too much depended on the personal abilities and experience of the chairperson who, in some communities, was selected for a strong position held rather than for knowledge of the Process and/or leadership skills. Proper training of the group and the facilitator at the outset, may have helped them select the most qualified chairperson, plan a more effective consultation program and operate more efficiently as a team.

4 Flexibility

There must be sufficient time and flexibility in the consultation schedule to allow for each community to exercise its control. Facility siting experience, specific needs and values varied in each community, thus, each proceeded at a pace it found comfortable. Flexibility was also required in handling substantive and unique issues to allow the communities to address them in the order they found most appropriate.

The Task Force could have been more effective in addressing the need for flexibility, but was restricted by its mandate constraints and the unforeseen level of community involvement. The Task Force should have set a firm deadline for allowing communities to participate in Phase three. This would have avoided the latecomers who came forward well after others had their consultation programs under way and, subsequently, had to rush to meet the April 30, 1990 deadline for submission of their Community Liaison Group report.

Further, the Task Force now recognizes that it would have been beneficial to have had the information packages prepared in advance to allow the Community Liaison Groups complete flexibility in deciding, for example, the order in which the information would be conveyed to them. Unfortunately, the Community Liaison Groups generally received the information in a fixed order.

5 Lack of familiarity with the Cooperative Siting Process

Clearer direction from the Task Force would have provided the Community Liaison Groups with a better understanding of what they needed to determine from the community in the consultation phase. Many of the groups had difficulty separating "whether they would proceed into Phase four" from "whether they would be willing to accept the proposed facility." The purpose of Phase three was to inform interested communities about the low-level radioactive waste management problem, the Cooperative Siting Process, the range of technologies available and the potential impact management options. Communities could then decide whether they would be willing to go forward into Phase four. Many residents had questions concerning the

potential impacts and risks associated with facility development and compensation, to which they wanted immediate answers; however, those questions can only be addressed once the results from the detailed site specific studies, slated for Phase four, are available.

In part, many of the aforementioned problems reflect common public apprehension regarding radiation and radioactivity. They also embody a scepticism of both the Cooperative Siting Process and the degree of true control given the community. Communities are accustomed to the conventional siting process, where detailed technical studies are undertaken before community consultation takes place. This novel approach to siting, where not all the answers can be provided upfront, created frustration in some communities.

6 Equity compensation

The Task Force may have underestimated the Community Liaison Groups' pragmatic approach to the Process. Residents wanted to know what benefits the community would derive by accepting the facility. The Task Force was unable to answer this question in any specific detail because it did not have a proposal—that is to be developed jointly with the communities and on the basis of detailed assessments of potential impacts and risks. Simply asking the community to trust the Process was inadequate; residents wanted to know at the outset what was in it for them. In retrospect, it would have been beneficial if the federal government had explicitly affirmed, in the Task Force's mandate, its commitment to equity compensation.

7 A stronger joint-planning effort

The Siting Task Force could have taken a stronger role in implementing joint-planning with the communities. Information packages were prepared to provide the Community Liaison Groups and local residents with basic information on such matters as radiation, health and safety concerns, the characteristics of the low-level radioactive wastes, possible management options, site elimination and detailed assessment procedures. However, the Task Force could have (1) more actively attempted to counteract false information and, (2) ensured that the benefits to the community of hosting a facility were given due consideration. In conventional siting processes, it

is the proponent who usually attempts to promote the benefits. This strong promotion has often evoked a defensive reaction in the communities; therefore, the lack of a proponent in the Cooperative Siting Process may have reduced the opportunity for such a response. However, it also left an information gap that should have been filled by the Task Force. It is not a matter of appointing a proponent to drive the Process; rather, the positive inputs that a proponent normally makes, such as substantiating the necessity of solving the problem and assembling factual information, need to be provided.

8 Community presence

The presence of the Siting Task Force and its Secretariat in the community was very important. The level of working relationship corresponded directly to the amount of time that was spent in each community. Establishing Community Liaison Group offices and staffing them with locally-hired facilitators provided day-to-day continuity and support to both the group and the Siting Task Force. It is essential that the local offices operate on a full-time basis in Phase four.

9 Focus on social issues

Certain social issues should have been given more attention. The information packages prepared by the Siting Task Force focused on health and safety matters, regulatory requirements and procedures, waste management technologies, impact management and other technical issues. More attention should have been directed towards discussion of non-technical and socio-political issues such as the perception of risks, stigma and ethical concerns. Although these topics may have been more difficult to address, community dialogue on such matters was essential to informed decision-making.

10 Tours

The tour of the low-level radioactive waste management facilities in Lewiston, New York and the Port Hope area was the most effective community information method used in the consultation phase. The tour helped the participating Community Liaison Groups and Council members acquire a better understanding of the problem in the Port Hope area, enabling them to compare the situation there with Lewiston's modern facility.

At each location, participants had the opportunity to talk to local citizens, elected officials and site managers, and obtain, first hand, facts about the low-level radioactive wastes and their subsequent management. After the tour, many of the participants reported that viewing the Port Hope area wastes and a modern waste management facility and listening to the experiences of those involved, gave them a better perspective on the nature of the problem which the Task Force is addressing and the type of facility required.

To dispel misconceptions and offer concrete visual examples, illustrative material (models) of typical facility lay outs and samples of the wastes would have been useful displays at meetings.

The January 1990 Thunder Bay meeting, which brought together all the Community Liaison Group chairpersons and facilitators, provided a much needed opportunity to share information and acquire a measure of peer group support. In particular, it allowed residents from potential volunteer communities to interact with source community representatives to better understand each other's concerns.

7.3 Community activities

Following are the activities carried out by the participating communities which warrant the consideration of the new Task Force before implementing the balance of the Process.

1 Control by the community key to cooperation

As reported in *Opting for co-operation*, community resistance to siting proposals can be linked to five basic areas:

- perceived risks
- inequities in the distribution of costs and benefits
- the stigma of an unwanted facility
- loss of control over forces affecting the quality of one's life and community
- lack of trust in proponents and regulators.

Of these factors, loss of control appears to be pivotal. The feedback that the Siting Task Force received from the Community Liaison Groups, local Councils and other concerned residents, indicated that the most valued features of the Cooperative Siting Process were its voluntary nature and the involvement of the community in the planning and decision-making process. Compensation, the provision of a local benefit and thorough risk and impact assessment studies were also viewed positively and will undoubtedly be key concerns in Phases four and five. But, without assurances of community control throughout the Process, it was unlikely that the principles and safeguards alone would have been sufficient to elicit community cooperation.

The concept of "community control" may be difficult to accept in municipalities where Council is frequently at odds with residents or organized community groups. *Opting for co-operation* acknowledged that Council was the decision-maker of record in the Process. It also recognized the necessity of involving representatives from the broad interests of the community. Better community profiling many have enabled the Task Force to be better prepared to handle communities with long histories of confrontation.

2 Gauging community sentiment

Community Liaison Groups should have been given more instruction in assessing community willingness to proceed into Phase four. Most of the groups relied on some form of community "straw vote" (taken in a local shopping mall), telephone poll, or television call-in show as a means of gauging the community's willingness to proceed into Phase four. In addition, individuals who opposed the siting of a low-level radioactive waste management facility circulated petitions to garner support. The Siting Task Force believed that such methods of measuring community acceptance were not appropriate for Phase three. Residents who voted, were polled or petitioned were without full information on the proposed undertaking or its potential risks and impacts.

3 Improved Municipal Council involvement

Local Councils should have been more actively involved throughout the entire Cooperative Siting Process. Although Councils were excluded from direct membership on the Community Liaison Groups, they were still encouraged to participate in the consultation process. Unfortunately, very few Councillors attended meetings or participated in any of the organized consultation activities and thus, they relied heavily on the Community Liaison Group's report and other outside sources for their information. The Siting Task Force stands by its decision to exclude Council from membership on the Community Liaison Group; however, adjusting the Process to foster more direct Council involvement would only serve to benefit the participating communities. This could be achieved by scheduling periodic joint meetings of the Community Liaison Group and Council, or by asking the group to report to Council, by deputation, on a regular basis.

4 Action plans in source communities

The need to develop action plans in source communities cannot be overemphasized. Until this occurs, potential volunteer communities are without a clear understanding of the volume and characteristics of wastes that they may want to consider accepting. Because this information was not available, the Task Force was unable, during the consultation program, to provide clear answers to related questions. Clearly, before either a potential volunteer or source community can seriously consider its waste management options, the action plans must first be developed.

Glossary of terms

Access-route communities

Municipalities that are along the transportation route to the site, and are, as a result, potentially affected by the transporting of low-level radioactive waste.

AECB

Atomic Energy Control Board

AECL

Atomic Energy of Canada Limited

CANDU

Acronym for Canadian Deuterium-Uranium Reactor.

Community

The Community is defined as the municipal corporation(s), native band(s), and affected individuals that volunteer for the low-level waste management facility.

Community Liaison Group

A group of citizens established by the Siting Task Force, independent of Council, to facilitate the participation and input of local residents in the siting process with the aim of ensuring full representation of a broad range of community interests.

Community relations measure

A policy, program or administrative procedure which aims to maintain, throughout the life of a facility, including its post-closure phase, a cooperative non-adversarial relationship between the facility owners and operators, and the local community.

Compensation measure

A policy or program which aims to offset the unavoidable negative effects of a proposed development and thereby enhance local benefits.

Contingency measure

A policy, program or operational practice which aims to aid in the detection and timely response to potential problems and unanticipated effects.

Equity compensation

Compensation given to a community, for any burden it will bear on behalf of the broader public, that will leave it better off than it was before.

High-level waste

Radioactive waste that initially requires continuous active cooling in order to dissipate the internally generated heat. In Canada, the only waste categorized as high-level is CANDU spent fuel.

Historic wastes

The low-level radioactive wastes which were produced in the past for which the federal government has accepted responsibility.

Impact management

A strategy of environmental protection that involves the application of compensation, mitigation, contingency and community relations measures identified as necessary through detailed impact assessment studies.

Low-level radioactive waste

All those radioactive wastes, other than spent fuel, arising from mining, milling, refining or use of materials containing radionuclides.

Mitigation measures

A facility or site design feature, construction practice, or operational procedure which aims to prevent or minimize any potentially negative effects of a proposed development.

Ongoing wastes

Low-level radioactive wastes which are currently being generated and stored either on-site at the producer or shipped to a low-level radioactive waste management facility.

Poll

A sampling or collection of opinions on any matter or issue.

Risk assessment

A scientific analysis of the probability of occurrence and consequence of potential hazards associated with a particular event.

Risk perception

A subjective or intuitive assessment of the hazards associated with a particular event.

Secretariat

A group, funded by Energy, Mines and Resources, whose primary responsibility is to support the Siting Task Force in implementing the Cooperative Siting Process.

Source communities

Municipalities where historic low-level radioactive wastes are currently located.

Volunteer communities

Municipalities that have volunteered to consider hosting a low-level waste management facility.

Appendix A

Impact management

Appendix A

Impact management

Impact management workshop February 7 & 8, 1989

Attendees	Affiliation
Mr. W. Ng	Ontario Ministry of the Environment
Dr. P. Conlon	Atomic Energy Control Board
Mr. R. Krauel	Environment Canada
Dr. P. Brown	Uranium and Nuclear Energy Branch, EMR
Mr. R. Pollock	Low-Level Radioactive Waste Management Office
Mr. J. Polkinghorn	Koochiching County, Minnesota
Mr. R. Osborne	Ontario Hydro
Dr. R. Lake	Rutgers University
Mr. A. Richards	Manitoba Hazardous Waste Management Corporation
Mrs. M. Dewar	Consultant
Ms. M. Munro	Environmental Assessment Board
Prof. P. Emond	York University
Ms. M. Garr	Ontario Waste Management Board

Appendix B

Response to site elimination criteria

Appendix B

Response to site elimination criteria

Respondents to site elimination criteria draft

Name	Affiliation
Mr. M. Paterson	Ontario Hydro
Mr. D. Lawrence	personal comments
Mr. D. Hardy	Conservation Council of Ontario
Mr. J. McRuer	Energy Task Force, Conservation Council of Ontario
Ms. C. Moore	Citizens for Responsible Nuclear Waste Disposal
Mr. G. Fitzpatrick	Ontario Ministry of Municipal Affairs
Mr. W. Smythe	Atomic Energy Control Board
Mr. R. Pollock	Low-level Radioactive Waste Management Office
Dr. P. Brown	Uranium and Nuclear Energy Branch, EMR
Mr. R. Kwiatkowski	Office of Environmental Affairs, EMR
Mr. R. Krauel	Environment Canada

Attendees at September 25, 1989 workshop

Name	Affiliation
Dr. R. Knapp	Senes Consultants Limited
Dr. H. Tammemagi	Acres International Limited
Mr. G. Latonas	Manitoba Hazardous Waste Management Corporation
Mr. W. Whitehead	Atomic Energy Control Board
Mr. P. Rennick	Siting Task Force
Ms. A. Armour	Siting Task Force
Dr. M. Ruel	Siting Task Force Secretariat
Ms. K. Klassen	Siting Task Force Secretariat
Ms. G. Underdown	Siting Task Force Secretariat

Appendix C

Letter of invitation to the 850 Ontario municipalities

Siting Task Force

Low level Radioactive
Waste Management

Groupe de travail

Choix d'un site de gestion
des déchets faiblement radioactifs

February 21, 1989

Dear :

On November 30, 1988 you were sent a letter which introduced the Siting Task Force on Low-Level Radioactive Waste Management and described the unique voluntary process we hope to implement. Since then the Siting Task Force has completed the necessary preparatory work to begin the next step in the siting process - public information meetings.

I am now writing to invite two representatives from your council or staff to attend one of the regional information sessions which will be held in eight locations throughout Ontario from late March through mid April (schedule attached).

I would like to emphasize that your participation at this information session in no way obliges your community to any future actions. In fact, the major focus of the meeting is to provide some background information and to discuss, in some detail, the nature of the voluntary process being pursued by the Siting Task Force.

The meeting is intended primarily to encourage the exchange of ideas regarding the siting process. It is not intended to solicit proposals from any of the participating communities. In essence, we are providing "food for thought" so that you can consult further with your municipal colleagues and consider whether or not you wish to continue to participate in this voluntary siting process.

We will be happy to address any particular questions you may wish to raise during an informal question and answer period at the meeting.

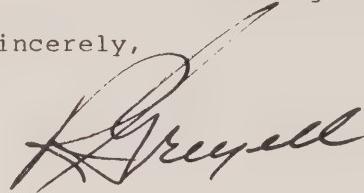
.../2

I would also like to bring to your attention the fact that these meetings will be open to both the public and the media.

To facilitate the broadest participation at these meetings, the Siting Task Force will reimburse your municipality for the out-of-pocket transportation and accommodation costs that your delegate representatives incur (details attached). If you have any questions regarding details of the information sessions please feel free to contact Lorraine Gailey (613-995-5178) or John Maddigan (613-995-5292) of the Task Force Secretariat.

I look forward to your participation at our meetings.

Sincerely,

A handwritten signature in black ink, appearing to read "R.L. Greyell".

R.L. Greyell
Secretariat Director

Enclosures (3)

Appendix D

Information packages presented
in communities

Appendix D

Information packages presented in communities

Title	Location	Presenter(s)	Date
Community Liaison Group Workshop	Atikokan Elliot Lake Red Lake Ear Falls Port Hope Manitouwadge Deep River Mattice Hornepayne Geraldton Upsala Township of James Hope Township Newcastle	Rennick (STF) Greyell (STFS) Gervais (STF) Gervais McHolm (STF) Rennick Maddigan (STFS) Ruel (STFS) Bell (STF) Bell Gervais Maddigan Rennick Rennick	Nov 6/89 Nov 6/89 Nov 7/89 Nov 8/89 Nov 9/89 Nov 13/89 Nov 15/89 Nov 15/89 Nov 15/89 Nov 16/89 Jan 24/90 Feb 9/90 Apr 9/90 Apr 10/90
Radiation, Health and Safety	Elliot Lake Atikokan Manitouwadge Red Lake Hornepayne Ear Falls Mattice Geraldton Port Hope Deep River Upsala Township of James Newcastle Hope Township Ear Falls Mattice Geraldton Port Hope Deep River Upsala Township of James Newcastle Hope Township	Becker (CAIRS) Aitken (CAIRS) Becker Aitken Becker Aitken Aitken Becker Becker Becker Aitken Aitken Becker Becker Aitken Aitken Becker Aitken Becker Becker Aitken Aitken Becker Becker	Nov 20/89 Nov 20/89 Nov 21/89 Nov 21/89 Nov 22/89 Nov 22/89 Nov 23/89 Nov 23/89 Nov 29/89 Dec 5/89 Feb 7/90 Mar 9/90 May 7/90 May 8/90 Nov 22/89 Nov 23/89 Nov 23/89 Nov 29/89 Dec 5/89 Feb 7/90 Mar 9/90 May 7/90 May 8/90

Waste Management Technologies	Elliot Lake Hornepayne Deep River Manitouwadge Atikokan Port Hope Geraldton Red Lake Ear Falls Mattice Township of James Upsala Newcastle Hope Township*	Tammemagi (Acres) Fortune (MacLaren) Tammemagi Fortune Maddalena (Acres) Tammemagi Fortune Fortuna (Trow) Tammemagi Fortuna Tammemagi Fortuna Tammemagi	Jan 7/90 Jan 8/90 Jan 9/90 Jan 9/90 Jan 9/90 Jan 10/90 Jan 10/90 Jan 16/90 Jan 22/90 Jan 31/90 Mar 15/90 Mar 15/90 May 29/90
Health and Safety and Regulatory Requirements	Elliot Lake Hornepayne Manitouwadge Geraldton Ear Falls Deep River Red Lake Atikokan Port Hope Mattice Township of James Upsala Newcastle Hope Township*	Whitehead (AECB) Whitehead Whitehead Whitehead Conlon (AECB) Whitehead Conlon Gerestein (AECB) Whitehead Gerestein Gerestein Gerestein Gerestein Whitehead	Jan 14/90 Jan 15/90 Jan 16/90 Jan 17/90 Jan 17/90 Jan 23/90 Jan 23/90 Jan 23/90 Jan 23/90 Jan 24/90 Jan 30/90 Feb 22/90 Mar 8/90 Jun 19/90
Site Elimination Criteria	Port Hope Elliot Lake Hornepayne Mattice Deep River Manitouwadge Atikokan Red Lake Geraldton Upsala Township of James Newcastle* Hope Township*	N/A Armour; Case (Senes) Armour; Gill (TDM) Armour; Gill Chamberlain; Case Rennick; Dodds (Trow) Rennick; Ovcjak (WastePlan) Dodds Bell; Fletcher (Dillon) Dodds Smythe (Acres)	Feb 11/90 Feb 12/90 Feb 13/90 Feb 13/90 Feb 13/90 Feb 14/90 Feb 20/90 Feb 21/90 Mar 20/90 Mar 29/90

Compensation, Local Benefits and the Environmental Assessment Process	Elliot Lake Hornepayne Port Hope Manitouwadge Geraldton Deep River Township of James Newcastle* Hope Township*	Armour Rennick McHolm Rennick Hemsley (STFS) Gervais Gailey (STFS)	Feb 18/90 Feb 19/90 Feb 20/90 Feb 20/90 Feb 28/90 Mar 6/90 May 17/90
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*to be completed in fall of 1990

Acres - Acres International Ltd.
 Dillon - M.M. Dillon Ltd.
 MacLaren - MacLaren Plansearch Inc.
 Senes - Senes Consultants Ltd.
 TDM - Trow, Dames & Moore
 Trow - Trow Ontario Ltd.
 WastePlan - HCI WastePlan

Appendix E

Speakers invited by Community Liaison
Group members

Appendix E

Speakers invited by Community Liaison Group members

Topic	Speaker	Date	Community
Low-level radioactive waste management	Mr. N. Rubin Energy Probe	Jan 22/90 Jan 23/90 Feb 4/90 Feb 5/90 Feb 6/90 Feb 7/90 May 3/90	Hornepayne Geraldton Elliot Lake Atikokan Red Lake Ear Falls Port Hope
Low-level radioactive waste management	Dr. G. Edwards Canadian Coalition for Nuclear Awareness	Mar 7/90 May 10/90	Atikokan Elk Lake
Low-level radioactive waste management	Dr. M. Resnikoff Radioactive Waste Management Associates, New York	Feb 28/90 Mar 1/90 Apr 3/90 Apr 5/90	Atikokan Upsala Deep River Elk Lake
Low-level radioactive waste management	Mr. I. Wilson Canadian Nuclear Association	Mar 5/90 Mar 25/90	Hornepayne Elliot Lake
Low-level radioactive waste management	Mr. B. Reguly Freelance journalist	May 3/90	Upsala
Radiation, health and safety	Dr. T. Cradduck Department of Nuclear Medicine, Victoria Hospital	Dec 10/89 Dec 11/89	Elliot Lake Hornepayne
Radiation, health and safety	Dr. E. Becker Canadian Institute for Radiation Safety	Mar 20/90	Manitouwadge

Radiation health risks	Dr. R. Bertell International Institute of Concern for Public Health	Apr 3/90 Apr 7/90 Apr 26/90 May 11/90	Elliot Lake Deep River Upsala Elk Lake
Radiation health risks	Dr. F. Prato Department of Nuclear Medicine, St. Joseph's Health Centre	Jan 16/90	Atikokan
Radiation health effects	Mrs. D. Meyerhof Environmental Radiation Hazards Division, Health and Welfare	Apr 11/90	Deep River
Environmental impacts of a low-level radioactive waste management facility	Mr. R. Krauel Environment Canada	Mar 19/90	Hornepayne
Environmental impacts of a low-level radioactive waste management facility	Mr. R. John Environment Canada	Mar 19/90	Hornepayne
Effects on the community of a low-level radioactive waste management facility	Mr. H. Sloma Lewiston resident	Apr 26/90	Elk Lake
Effect of the wastes on the community	Mr. J. Veldhuis Port Granby resident	Jan 21/90	Elliot Lake
Effect of the Swan Hills facility on the community	Ms. M. Hanson Former Mayor, Swan Hills	Feb 22/90	Red Lake
Effect of the Swan Hills facility on the community	Ms. D. Spiller Member of Swan Hills CLG	Feb 22/90	Red Lake
Waste management at the Chalk River facility	Dr. D. Charlesworth AECL	Dec 12/89	Deep River
Land-based options	Mr. B. Pollock Low-Level Radioactive Waste Management Office	Feb 28/90	Port Hope

Harbour options	Mr. B. Pollock Low-Level Radioactive Waste Management Office Mr. D. Main Mr. G. Dolinar Mr. K. Phillipose AECL	Feb 27/90	Port Hope
In situ management of the Welcome site	Dr. D. Chambers Senes Consultants	Jun 12/90	Hope Township
Clay barriers and ground water	Mr. D. Netherton Geotechnical Engineer	Mar 20/90	Manitouwadge
Clay containment structures	Mr. W. Sencza GECO Mine	Mar 20/90	Manitouwadge
Safety discussion	Mr. H. Sequin United Steelworkers of America	Feb 17/90	Elliot Lake
Remedial action program	Ms. S. Weston Environment Canada	Jan 10/90	Port Hope
Public consultation techniques	Dr. P. Homenuck Institute of Environmental Research	July 24/90	Newcastle

Copies of all the reports referred to in this document
can be obtained by contacting the:

Siting Task Force Secretariat
9th Floor, 580 Booth Street
Ottawa, Ontario
K1A 0E4

Telephone: 1-800-267-7716
or (613) 995-5203



